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The Bi Sheng: "More like a book, and less like a computer"

Book Skills and the Design of the Electronic Book

by Stan Ruecker

THE UNIVERSITY OF ALBERTA
FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled:

The Bi Sheng Electronic Book

submitted by STANLEY ISAAC RUECKER in partial fulfilment of the requirements for the degree of Master of Design.

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Abstract

This thesis describes the conceptual design of an electronic book, its printer, and its printing software. If a pair of difference poles are established with the laptop computer at one end and the conventional printed book at the other, the Bi Sheng is positioned quite far along the spectrum toward the conventional printed book. The design is based on five sources: the designer's intuition, extensive informal conversations with a variety of people, a literature review, two focus groups, and a Web survey of frequent book readers. It presupposes some technological innovation beyond what is currently available for materials, but does not require any radical development – many of the components are either already available in some form commercially, or are currently under development.

Introduction

Contents

The topic of this thesis is the design of an electronic book that is more like a book and less like a laptop. The principles for the design were gathered from five sources: the designer's intuition; extensive informal conversations with a variety of people; a literature review; two focus groups; and an Internet-based survey. The thesis is in partial fulfillment of the requirements for a Master of Design degree in Visual Communication Design from the Department of Art and Design at the University of Alberta.

Bi Sheng

Bi Sheng, as every Chinese schoolchild knows, was the 11th century¹ inventor of moveable type. Unfortunately, this inventor's name has been occluded in western history by Gutenberg's reinvention of moveable type in the 15th century.

¹ Or rather, Song Dynasty.

Designer's intuition and informal conversations

The principle of examining a common object (in this case the conventional bound book) in terms of enhancing or replacing it with a computerized interface (some form of electronic book) derives from a visiting lecture given by Bill Buxton from the University of Toronto in the spring of 1998 at the University of Alberta Department of Art and Design.

My own intuition was subsequently the starting point of this particular research project, insofar as it set the ground for what I believed were the range of possible solutions in this case. The ideas based on my own intuitions were subsequently modified or developed based on my conversations with others, a literature survey, and the primary research I did, involving two focus groups and a Web survey.

Summary of designer's intuition and informal conversations

Based on my own experience with conventional bound books – which includes as much as three decades of owning, borrowing, lending, recommending, writing, indexing, designing, and reading, as well as talking about books (both conventional and electronic) with a wide range of people – I felt that the electronic book that would best suit my own tastes would be one that met the following criteria:

1. It should be as much like a printed book as possible.
2. It should not forfeit the primary advantages of digital text.

There were, however, several questions on which intuition alone was not adequate to reach any conclusions. These questions were:

1. Which features of the conventional printed book are essential and which optional?
2. To what extent could even the most successful electronic book be expected to replace the conventional printed book?
3. Should the users of the electronic book be able to load their own titles, or should the electronic books come pre-loaded?

Implications for the design of the electronic book

In looking at my intuitive criteria, I was able to develop the following more detailed list of implications.

1. It should be as much like a printed book as possible.

Specifically, it should be:

- portable
- lightweight
- easy to use

Further, I did not think it should involve any display technology that generated light. I had heard too many complaints about eye strain from people reading off monitors.

2. It should not forfeit the advantages of digital text.

That is to say it should be susceptible to electronic processing, allowing for search functions, annotations, and variable formatting.

Detailed discussion

I began this research project with a set of my own opinions – what might loosely be called a designer's intuition – about the electronic book. I've loved conventional bound books for more than thirty years. As a child I haunted my town library, where my

mother was librarian. I have two degrees in English literature and at one point had collected a personal library of over 1,000 volumes. I have also worked for more than five years as a contract book designer for several different publishers – primarily the Extension Division at the University of Saskatchewan.

But I've also been fascinated by the idea of an electronic version of the book since my childhood in the sixties, when I used to imagine a time when I would be able to scan the contents of a library into electronic form and carry it around with me, like the heroes of the science fiction novels of the fifties.²

That time is now upon us, and I spent several years in the mid '90s working as a consultant with a service company that sold computer technology for people with various handicaps. One of those product lines consisted of a range of readers for the blind, which were interesting because they use a scanner and optical character recognition (OCR) software to turn printed materials into electronic text, which can then be read out loud by a device that handles speech synthesis. Two of the major manufacturers at that time were Kurzweil and Arkenstone.

The main drawback to products like the Kurzweil or Arkenstone readers is that the scanning process is quite laborious, although it is several orders of magnitude faster, and certainly more convenient for blind scholars than the conventional translation services, which can take up to a year to convert a text into Braille, while an experienced operator can OCR a two-hundred page novel in a short afternoon. But in the early to mid '90s neither I nor my clients were aware of the existence of data banks holding freely accessible pre-scanned texts, although exchanges were sometimes arranged within the local blind community. Storage devices, however, were still quite small and expensive, and the cost formed a barrier to the collection of texts in electronic form, so that many of my clients simply listened to their scanned texts and then deleted them.

Five years later the situation is somewhat different, with thousands of texts now being available from large text archives on the Internet. These archives include much material that was previously out of print, but also contain many of the classics. Some of them contain images, but for the most part they are text-only or text-encoded, which process adds varying levels of semantic tagging that allow the reader with the right tools to search or in other ways process the text using more than the character strings.

But there is still a problem with these texts, which has to do with the mechanisms available for reading them. Since at this point I am still addressing my intuitions, I would say that I had a strong suspicion that the vast majority of people do not like reading extended text off a monitor. I know this is true in my own case, and that I have no one among my acquaintance who does routinely read that way. I have also checked the literature, and included the question in my survey, and the consensus is the same.

There might be any number of reasons for this aversion to monitor reading, including lack of portability, the luminosity of the screen, the related experience of television as a medium that is not strongly text-oriented, the verticality of monitors vs. the horizontal default for printed pages, and even problems of resolution and refresh rate (or flicker). This was the list I had in mind prior to my research, and after reviewing my survey results and having spoken with my focus group participants, I can now add several other items, including eye strain and the related tendency to reduce blink rate in front of a monitor, the psychological or affective factor of a perceived reduction in retention, the difference in expectation between the more static printed page and the more interactive Internet, and technophobia.

So, given that people have an aversion to reading from the monitor, there are four other alternatives available for accessing electronic texts: a different kind of monitors

² Jim Marlow, for instance, in Robert Heinlein's *Red Planet*, has an electronic reading device built into his desk, with the books stored on spools.

(perhaps an improved form of LCDs?), printouts made locally, speech synthesis, or specialized reading devices – that is, what I am calling electronic books.

All three of these methods have their advantages and shortcomings, but I was primarily interested in the electronic book, because I think it has the greatest potential for fulfilling my early dream of providing an extensive portable library. I was encouraged in this respect by the work of Bill Buxton, who foresees an increasing application of computing technology in specialized devices where the interface is not a monitor, keyboard, and mouse, but rather physical analogs to everyday objects. In his lecture at the University of Alberta as part of the series Re-thinking Design for the Twenty-first Century, Buxton spoke of a computerized chess game already available commercially which uses a regular chess board as the interface, and predicted a day when the front of the refrigerator, for instance, would act as an electronic message centre.

The question remained, however, as to what might be the characteristics of a genuinely useful or perhaps widely acceptable electronic book. It struck me that existing designs, and in fact even the few I had encountered in science fiction, shared the quality of being more like computers than they were like books. So I thought I might establish what the personal construct psychologists call a pair of difference poles, with one extreme represented by the laptop computer and the other end of the spectrum established by the conventional bound book. Along that spectrum, then, I would somewhere place my design, preferably as close to the conventional bound book as I could go without entirely relinquishing the possible benefits of having digital text. To end up at the difference pole itself would of course be to simply reinvent the conventional bound book, while at the other extreme would be a design that was essentially a laptop with text display capabilities.

The next step, therefore, was to define the features that comprised a conventional bound book. In this respect it would be “necessary,” as the philosophers say in a somewhat different framework, “but not sufficient” to look at the physical character of books, since it was the physical device that seemed in my mind to have severe shortcomings in its existing forms. But it is not just the physical object but also its personal, social, and cultural context that help to define it. So in my own mind I began to sort the qualities of conventional books in terms of these five human factors: physical, affective, cognitive, interpersonal, and cultural.

Human factors

The list that I came up with was not a complete one, nor was it particularly well organized. But it did serve as a sorting ground for the issues that I wanted to think about, giving me the opportunity to build a framework for understanding as much as I could about what people thought about books. I came up with the following list of human factors:

Physical

- Binding details
- Cover texture
- Surface presentation
- Paper
 - Quality
 - Weight
 - Age
- Smell
- Reading issues
 - Legibility
 - Portability
 - Storage

Affective

- Preferences expressed during purchase or borrowing
- Emotional attachments to particular books

- Cognitive
 - Traditional book design
 - Web design
 - Acrobat format
 - Books vs. ephemeral publications
 - Costs (author's time, publisher's money, reader's money and time)
 - Books vs. other media
- Interpersonal
 - Reading groups
 - Informal conversations about books
- Cultural Themes
 - Publishing issues
 - Distribution
 - Web based
 - Physical Retailers
 - Authorship
 - Accountability
 - Payment
 - Influence
 - History
 - Class distinctions
 - Literacy

Using this list of sub-factors, I would subsequently set out to develop a survey and a set of focus group questions that would combine these topics with the practical considerations of what intuition could not address specifically about the design of an electronic book that would be acceptable to frequent readers of conventional bound books.

Questions unanswered by intuition and informal conversation

For one thing, I knew that portability was a major consideration in my own case, since I had finally given away a personal library of about 1,200 books rather than having to move or store it one more time. But what did other frequent readers think about the possibility of having, for example, all of their books in one reading device? Would it appeal to other people in the same way it appealed to me, or was I idiosyncratic in this desire?

Similarly, there was no way that my own experience was enough to make a decision as to whether the new design needed only one screen, or perhaps several screens that could be used like pages but with a refresh cycle taking place once they were turned, or whether the electronic book really needed one physical page per page of text, as was the case with conventional printed books.

Finally, I wanted to find out what other frequent readers thought about the possibility of the pre-printed electronic book, which would ship already loaded with all its titles, but could not be modified by the reader. It seemed to me that this kind of device might find ready acceptance, since readers were used to having their books static, and since not every reader could be relied upon to handle the technology that might be entailed in loading an electronic book.

So it was with these questions in mind that I set out to develop the phases of the project where I went further afield to see what other frequent readers had to say.

Literature review

There is currently only a limited literature on electronic books as physical reading devices, perhaps since the technology is still in its infancy. The recent release of three electronic books has resulted in a number of reviews in the popular press. There are also some related studies on the nature and role of a variety of potential components of the electronic book, from experiments with people reading from the monitor to a wealth of studies and even conferences dealing with human/computer interface issues. Since the solution proposed for the Bi Sheng involves the computer and monitor only as parts of the assembly process, but not for actual reading, much of the discussion seems somewhat beside the point.

As a result of the limited number of direct practical studies, the literature reviewed was drawn from a variety of fields, including human factors, humanities research methodologies, traditional book design, and a somewhat more widespread literature on hypertext and the issues relating to electronic text in general, including discussions of related areas such as publishing and copyright.

Summary of results

There are many authors who feel passionately about books, who see the conventional bound book as a primary cultural currency that is undergoing alarming changes with the advent of the computer and electronic text. Changes brought about by electronic text are understood as being far-reaching, with some people suggesting that the role of text in our culture is central enough that the redefinition it is currently undergoing will be responsible for a variety of apocalyptic consequences, while for others the future is conversely utopian.

Copyright issues for electronic text have not yet been settled, and although there have been a number of international commissions established to look into the problems not just of legislation but also of enforcement, there is currently no resolution to the debates.

The existing electronic books – the Rocket eBook and the SoftBook in particular – have not met with widespread critical acceptance. In popular reviews they have largely been found wanting in comparison with conventional bound books.

There has been some discussion of systems designed to print conventional bound books on demand, with various levels of flexibility available to the end users depending on the degree of design control they desire.

Implications for the design of the electronic book

The primary virtues of electronic text as discussed in the literature include:

- interactivity
- rapid updating
- amenability to processing

If the Bi Sheng were to provide these functions it would therefore position itself closer to existing models of electronic text and further from existing models of conventional bound text.

There may be a moral issue concerning copyright involved in the development of a viable electronic book, and the developers would need to consider to what extent they can and should be involved in the contemporary debate over digital copyright. Certainly this is not a debate that can be resolved by a single developer, since the field is at once too diverse and too contested.

The Bi Sheng will likely be evaluated in the popular media in comparison not with laptops but with conventional bound books.

An on-demand printing system for conventional bound books could be adopted, at least in its broader principles, for use with the electronic book.

Discussion of the literature

The following discussion is divided into the following parts:

- electronic books
- hypertext
- copyright
- on-demand printing systems
- descriptions of current electronic books
- reviews of current electronic books

Electronic books

Electronic books perforce involve two components: electronic or digital text, and the electronic reading device. Ideally it should have been possible to draw the distinction between electronic text on the one hand and electronic reading devices (which is strictly speaking the subject of this thesis) on the other. However, the writers who are interested in electronic text for the most part take the computer and the necessity for reading from the monitor as a given, a basic and unavoidable price to be paid by anyone who wants access to the ever-growing world of digital information in any form, and of digital text in particular.

As a result, their comments on electronic reading are interwoven to such a degree with the current design of a computer, monitor, keyboard, and mouse that it would not be a profitable expenditure of resources to attempt to tease out the two strands, assuming that it were even possible. What might be more useful is to highlight the variety of topics that arise quite quickly in the course of the various discussions of the Internet, hypertext, and electronic texts in general. These include but are not limited to:

- publishing
- education
- library science
- the roles of author and reader
- copyright and intellectual property
- implications for various humanities
- politics at both the national and international levels.

To venture into the literature on electronic texts is to enter not into an unemotional discussion, but rather a hornet's nest of opinion, and perhaps even more revealing, downright polemic. The implication of the tone of this kind of writing is one of the most significant of my findings of the literature review, although it sounds simple enough in summary: many people living in the western world at the end of the twentieth century are passionately interested in books.

Hypertext

Electronic text might be defined as any text that is created on or accessed from a computer, as opposed to being created using analog devices and accessed from paper. Even this definition, of course, is flawed, in that the practise of many readers is to access a given piece of text on the computer, then print it to paper for actual reading.

It would be safe to say that the advent of electronic text caused something of an intellectual furor in the humanities in the 1990s. Various speculative thinkers in a number of disciplines published treatises for or against the changes that were happening in the way that text was presented. On the one hand was the supersessionist utopianism of people like George Landow, a professor of English and Art at Brown University who sees hypertext as a radical technology – that is, a technology destined to reshape the way people read, think, and live. For Landow, the ability to link texts together and allow the reader to jump from one text to another is an empowerment of readers fulfilling the

vision of literary critics like Jacques Derrida and Roland Barthes, who foregrounded the active participation of the reader that is necessary even in the process of reading conventional bound books, and is of course all the greater in a medium like hypertext, where the reader has to choose a path through a variety of options.

On the other end of the intellectual spectrum are the genuine luddites and prophets of doom. One example is literary critic Sven Birkerts, who prognosticates the possible sacrifice of all literary culture and perhaps even a renunciation of what might be called the positive human spiritual values through an over-enthusiastic embracing of change for change's sake:

My core fear is that we are, as a culture, as a species, becoming shallower; that we have turned from depth – from the Judeo-Christian premise of unfathomable mystery – and are adapting ourselves to the ersatz security of a vast lateral connectedness. That we are giving up on wisdom, the struggle for which has for millennia been central to the very idea of culture, and that we are pledging instead to a faith in the Web. What is our idea, our ideal, of wisdom these days? (Birkerts, p. 228)

There are many other writers on the spectrum between these two difference poles. One is Jay David Bolter, who tentatively suggested in 1992 that the change from printed to digital text might mark a transition from a cultural preference for hierarchy to a widespread preference for relational, or as Bolter prefers, network structures (Bolter, p. 231). The difference is one that could be interpreted in a positive light, suggesting as it does an increasing willingness to exercise what cultural anthropologists call “cultural relativity” even within one’s own culture, as opposed to necessarily embracing the feudal models perpetuated by the various institutions of western patriarchy.

But Bolter does not view the future he predicts with the unbridled enthusiasm evident in writers like Landow. Bolter is – somewhat paradoxically perhaps – a classics professor at the University of North Carolina and the author of a relational writing program called Story Space, and the divergence of his interests finds expression in a kind of technological fatalism. In discussing how the emphasis in discussions of cultural literacy has shifted from the knowledge of traditional texts to the knowledge of computers, Bolter writes: “The loss is real; the hope for a cultural center based upon traditional texts must now be abandoned.” (Bolter, p. 237)

On the other hand, unlike Birkerts, Bolter does not see the replacement of traditional texts in bound form as necessitating the loss of actual literacy.³ On the contrary, he claims that literacy will forge ahead and break new ground, perhaps through the adoption of more relational writing models like Story Space. Interactive fiction represents for Bolter a new kind of writing and reading experience, positioned somewhere between the conventional book and the computer game. In discussing Michael Joyce’s hyperfiction “Afternoon,” Bolter remarks: “‘Afternoon’ combines the literary sophistication of a printed work with the immediacy of a computerized adventure game. ‘Afternoon’ is a fiction and a game at the same time. . .” (Bolter, p. 123)

Copyright

“The main drawbacks with Internet books centre on the trading and regulation issues: paying for the book; protecting copyright; ensuring that modified versions are not disseminated; protecting against or prosecuting libel.” (Barrett, p. 64).

Unfortunately, after this clear start, Barrett does not go on to a similarly clear analysis of the issues involved. His opinion is basically that international digital copyright is protected under the Berne Convention of 1885 and subsequent amendments, and that encryption and decryption strategies – that is proprietary document methods – will sew everything up

³ Literacy has of course itself always been a highly loaded political term, with as many different definitions as there are political viewpoints on the importance of reading.

nicely (Barrett, pp. 185–190). Barrett also seems slightly unclear on the fact that neither copyrights nor patents are protection for ideas, but rather for exact wordings or implementations, for embodiments of concepts rather than the concepts themselves.

The lack of legal protection for ideas is in my opinion one of the mechanisms whereby the rich stay rich, but the exact opposite is seen as the case by Richard A. Lanham, who worries that one of the changes electronic media are fomenting is the movement toward copyright protection of ideas. For Lanham (p. 275), who is admittedly at this point playing devil's advocate, ownership of ideas is tantamount to a stranglehold on creativity. He looks forward to a copyright-free society, where writers have no legal protection whatsoever, since the old laws were based on the existence of print culture and electronic text will supersede print.

One of the problems with copyrighting electronic material lies in the difficulty of attaching identifying elements that are not tucked away in “Read Me” files that can easily become detached from the body of the image, document, or program. A fairly recent strategy involving embedding digital watermarks is one approach that is being tried by Adobe, but since it also involves the expense of paying for the registration of the watermark it may not see widespread adoption. However, the use of embedded marks is one strategy proposed by Liane Sebastian in her list of suggestions for protecting the rights of the owners of digital documents. Like Barrett, Sebastian is unequivocal in stating that rights accruing to printed documents also apply to digital documents. But she is equally forthright in explaining that enforcement is not currently likely: “because a file is not physically protected, professional ethics and courtesy must reign” (p. 274).

On-demand printing systems

One of the alternative futures for the book involves not an electronic reading system, but rather an electronic delivery system, with “virtual bookstores” that maintain physical stock only in the form of unprinted paper and bindings. Potential book buyers then have the opportunity to survey a larger number of potential titles, which are produced on demand only at the point where a choice has been made to purchase.

One such system is outlined in detail by Karsten Lücke, who suggests that an on-demand printing and binding system could do more than reduce shipment and stock overhead while offering a larger number of titles to the buyer. In Lücke's proposed system, the printing software allows the buyer or the bookseller to select from a range of design options, including everything from font and font size to all the details of page layout, depending on their expertise and interest.

At the basic level are a number of pre-defined layouts created by a professional book designer. But the basic choices can be overridden in favour of other design decisions, which may or may not be guided by a set of designer's hints, depending on how much constraint seems appropriate (Lücke, pp. 136-137). The level of constraint is absolute, however, with regard to the content of each title. In Lücke's words, “The text itself is an untouchable good. Only the design is adaptable to the reader's needs” (p. 147).

Descriptions of current electronic books

In early 1998 three electronic books were announced, which were positioned not as hypertexts or digital stories, but rather as electronic reading devices. Earlier attempts at developing a commercially viable electronic book date at least to the late 1960s, with Alan Kay's Dynabook. Later entries include the Sony Bookman of the early 1990s, but no electronic book prior to 1998 could be seen as a commercial success. The three electronic books described below are the Rocket eBook, the SoftBook, and the EveryBook.

The Rocket eBook

The Rocket eBook (see Figure 1) is the only one of the three electronic books currently on the market that I was able to examine personally, thanks to professor Margaret Mackey of Library and Information Studies at the University of Alberta. Other details are from the Rocket eBook Web site.

Design

The Rocket eBook is a single-display device roughly the size and weight⁴ of a thick trade paper volume. It includes a stylus and a touch-sensitive display, and an optional leather case is available through some suppliers. One side of the Rocket eBook is curved to resemble the shape of a paperback book that has been rolled back in the palm.

Price

The Rocket eBook lists for US\$500. The optional leather case is an additional US\$120. In mid-April 1999 many titles listed for roughly US\$4.00, although some ranged as high as US\$25.00.

Titles

Titles for the Rocket eBook are available in a proprietary format from Barnes and Noble. The Rocket eBook also supports HTML-encoded text and straight text files. People can also generate texts for the Rocket eBook, which can be saved to computer or shared with other people.⁵ In mid-April 1999 the Barnes and Noble site listed 473 titles available for the Rocket eBook.

Features

The Rocket eBook's physical size is 5" x 7" x 1". The screen is 3.5" x 5.5" with an advertised resolution of approximately 106 dots per inch. In practise the resolution is poor, with the 10-point font (the smallest of the two choices) rendered virtually unreadable through severe bitmapping. The stylus and a speaker are included in the basic reader; an infrared port is optional.

The screen is toned green with black text. The text block fills the screen with no screen margin. There is no flicker.

Orientation defaults to right-handed portrait (the page turning buttons and curved spine are on the left) but can be changed to any of the four orientations.

Various functions are provided by menu options, including underlining, a choice of two font sizes, and a choice of several font types. The default font is a version of italic Times Roman with a serious kerning problem on lowercase "f."

From a software perspective the Rocket eBook is procedural rather than object-oriented. That is, the user chooses a function and then specifies which text to apply the function to, rather than choosing the text first and the function afterward.

Barnes and Noble maintains a Web-based bookshelf for each purchaser, where the proprietary titles that have already been purchased can be stored for future downloading. Optional software is also available to enable the user to store proprietary texts locally on their own hard drive.

⁴ 22 ounces.

⁵ Barnes and Noble provides a web page for this purpose.

The Rocket eBook's memory capacity is roughly ten paperback novels. Batteries are recharged by placing the device in its docking cradle, which also serves to attach it to the computer.

Position within the current book is indicated not by page number (there are none) but rather by a percentage bar on one side of the display which lets the reader know how much they have read of the total book. There is, however, no indication of total length.

Market

The Rocket eBook is explicitly targetted at voracious readers, professionals who need to stay current, and executives who scour journals on overseas flights.

The SoftBook

Design

The SoftBook (see Figure 2) has a leather-bound front cover that opens onto a single 9.5-inch display. The default content is the last page the reader left when closing the SoftBook. The screen flips a virtual page at a time rather than scrolling.

Price

The SoftBook lists for US\$600. A payment plan is available.

Titles

The SoftBook Web site provides a storage facility for people who wish to shelve their electronic titles. It is free for the first 90 days after purchase.

There is a certain sensationalism about the marketing of SoftBook titles, which include Monica Lewinsky's biography and Bill Gates's *Business @ the Speed of Thought*, both of which were released simultaneously in conventional bound form and in SoftBook format.

Features

The basic SoftBook holds 1,500 pages of text, and additional flash memory is available, which will expand the memory to 6,000 pages. Future memory expansion is promised for a maximum of between 50,000 and 100,000 pages. The SoftBook comes with an Internet connection and 33.6 kbps modem.

There is a search function, a choice of font sizes, and a touch-sensitive, backlit greyscale screen. The reader can "make annotations directly on the screen, erase them, highlight text, bookmark pages and link to related information."

The SoftBook has no moving parts and is therefore silent. It comes with a lithium-ion rechargeable battery good for five hours of viewing after a one-hour charge, an AC adapter, and a phone cord.

At the corporate level, SoftBook Press offers on-line conference and Q&A sessions, as well as a Quick Start publishing package for internal corporate publishing programs.

Market

The SoftBook is positioned for professionals who need "to easily, quickly and securely download and read a wide selection of corporate documents, books, and periodicals." To this end the SoftBook features a document security system.

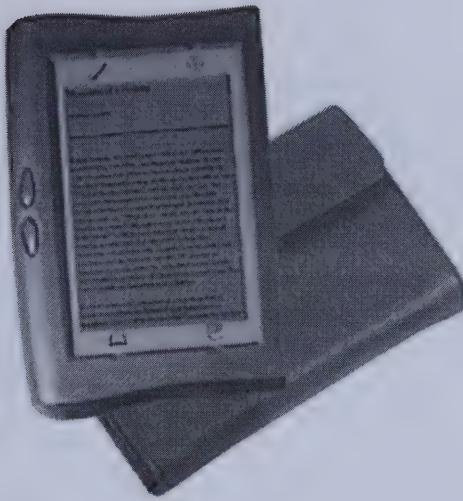


Figure 1: The Rocket eBook



Figure 2: The SoftBook

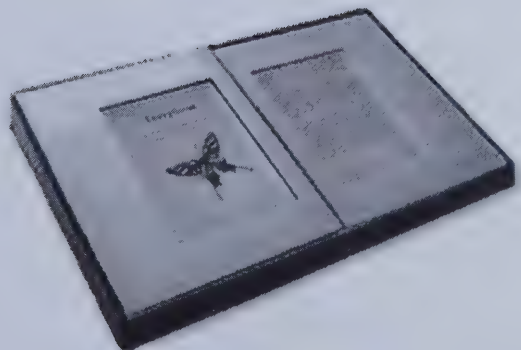


Figure 3: The EveryBook

The EveryBook

The EveryBook (or EB Dedicated Reader – see Figure 3) is the most expensive of the three electronic books currently on the market, and it is possible that it was actually a vaporware announcement – that is, it may have never got past the announcement stage and actually appeared on the market. There appears to be no dedicated Web site available (April 1999) and I have not been able to locate a supplier.

Design

The EveryBook has two facing LCD screens in a device that folds open on a central hinge like a book. Pages flip a page at a time rather than scrolling.

Price

The EveryBook was announced in the spring of 1998 when a prototype was on display. The list price was US\$1500.

Titles

EveryBook is working with 20 content publishers, among them IDG Books, McGraw Hill, and Macmillan Publishing. Adobe's Acrobat PDF format is intended as the standard distribution vehicle. Titles are supposed to be available from a dedicated Web site.

Features

The EveryBook turns on when it is opened. It has a leather binding. The display is "high resolution" with colour graphics. Contents are indexed by thumbnails of book covers or covers of other documents, as organized by the user. The screen is touch sensitive.

The EveryBook comes with a PCMCIA slot, a low power consumption AMD chip, flash memory, and an infrared port.

Market

The EveryBook is originally positioned for professionals – doctors, pharmacists, lawyers, architects, engineers, the military, and sales professionals, "for storing and instantly updating their professional libraries and for internal document management."

Two future releases are aimed, respectively, at students (US\$1000) and general consumers (US\$500). The student version will be preloaded with textbooks and required reading materials.

Reviews of current electronic books

Reviews of the Rocket eBook and the SoftBook in the popular media (newspaper, magazine, and Web) have tended to compare them rather unfavourably to conventional bound books, in many cases generating lists of shortcomings. The titles of some of the reviews are in themselves a summary of the reception:

- SoftBook a Hard Read
- The printed page is dead – again: rocket in your pocket. Still no substitute for the feel of a book.
- The E-Book: Pipe Dream or Potential Disaster?

More detailed comments include complaints about readability, and the physical differences that exist between the electronic books and their conventional bound equivalents: "a good read is still about more than just being able to follow the text – it's about the feel of pages in the hands, the smell of a binding, the look of the volume on a bookshelf" (Hsu, p. B2).

Focus groups

Two focus groups were held to obtain information on book use from people who use books frequently. The cohort was women graduate students at the University of Alberta, and seven people participated: four in the first focus group and three in the second. The focus group was chosen from a variety of possible data collection methodologies as being potentially useful in a case where the design process was at a preliminary fact-finding stage (see Appendix D: Research methods).

The primary advantage of a focus group over a survey is obviously the length and depth of topical conversational detail which can be elicited from the participants. Whereas the combined text-based comments of the 51 survey participants (that is, those who weren't also in one of the focus groups) equate to roughly 8,000 words, the complete focus group transcripts (for seven participants plus the moderator in each case) total 31,000 words.

Of course quantity is not a valid measure of either the applicability or validity of the discussion, but it does give some suggestion of the difference in kind of the two methods of data collection. Whereas people are apt to summarize in writing an answer to a survey, and to respond in relatively few words, the dynamics of a group conversation tend to draw people out somewhat.

In addition, the efforts of the moderator, who is attempting to encourage and sustain individual trains of thought, help to some extent to facilitate the discussion, and can occasionally even compensate on the fly for whatever shortcomings might exist in the wording of the written discussion questions.

Design of focus group questions

There are several principles behind the design of focus group questions. They should, to start with, be interesting questions, with enough intrinsic discussion value for people in the cohort being studied that there is some motivation for the focus group participants to look closely into the topics brought forward to the table. On the other hand, the questions should not be so difficult that the effort to talk about them is prohibitive. Many of these principles have been formulated with regard to written questionnaires, where no moderator is present (Ferber, p. 2–95) but they are similarly valid, if in some cases less critical, in a conversational framework, where the moderator is available to make adjustments within the dynamic setting of the group discussion.

From the investigator's perspective the questions should have a clear and evident relation to the larger investigation of which the focus group forms a part. That is, the answers to these particular questions should all help address the problem at hand. It seems natural to apply some breadth of interpretation in meeting this criteria. It seemed to me that some pertinent pieces of information and opinion might inadvertently never be collected through an oversight on the part of the investigator in writing the questions. Better, I felt to allow the discussion to spread into somewhat tangential topics rather than risk tightening the focus to the point that nothing new was learned.

In this study I intended the focus group questions to use as their attractors the five human factors, which were chosen to provide some framework under which the participants could understand the point of the individual inquiries. I provided a copy of the questions to each of the participants so they were able to read ahead and get a sense of the overall discussion before the conversation started. I also hoped that providing the participants with the questions ahead of time would encourage a more relaxed and collegial spirit, which in fact seemed to be the case.

Another important feature of focus group questions in particular, but also of study questions in general, is that they should not include an unreasonable amount of overlap. That is, the answers to one question should not also be the answers to other questions. Like the applicability requirement, this criteria seems simpler in theory than it is in practise, and this study suffered to some extent through an undue amount of

common ground among the questions. Their explicit division into human factors helped reduce the effect somewhat, but nonetheless there were responses, to choose one example, to the question “What do you like about books?” that might have been more properly included as answers to “What is the difference between the experience of reading a book and the experience of dealing with other sources of information and entertainment, such as movies, television, or the Internet?”

Unit of analysis

It is also important to identify the unit of analysis in a focus group. There are essentially three possibilities: the group, the individual, and the statement. Various researchers choose one of these units based in part on the purpose of the study and its location within the larger project. At an early fact-finding stage, where the investigator is attempting to survey the total range of opinions held, the unit of analysis might very well be the statement. This might have been the case in the present study, where the focus groups were undertaken before the design solution was formulated. As an alternative to the statement, however, the unit of analysis chosen in this case was the dialogue – that is, any circumscribed exchange of ideas on a unified topic was treated as one item of information.

An alternative strategy is to place the focus group later in the design process, where the discussion can serve as a check for unearthing potentially embarrassing alternate understanding or interpretations of a communicative attempt. Such groups will tend to use a larger unit of analysis, either the individual or the group itself, since there is a sense in which the consensus that is either achieved or is not achieved in some way reflects what might be expected as a similar consensus among people after implementation. The shortcoming of this approach is that it essentially treats the focus group as a representative sample of the larger cohort.

The use of focus groups in the second strategy has also been criticized by design theorists like Rob Wiseman, who prefers actual user testing under implementation conditions. For Wiseman, focus groups, like laboratories, are too removed from the details of daily life to provide an adequate indication of what can be expected as the result of implementing a particular communication design (Wiseman et al, p. 2).

Focus group cohort

The participants were women graduate students from either the Department of English or the Department of Art and Design at the University of Alberta. They were invited to attend one of two focus group sessions, where they first completed a printed copy of the survey, then spoke to a number of focus group questions (see Figure 4: Focus group questions).

I chose this study group on the basis that:

- a) they are members of a group (i.e. graduate students) that is likely to use books frequently
- b) as women, they are not traditionally understood to be early adopters of computer-related technology, although all of my participants were conversant with computers and used them more or less daily in their work as graduate students
- c) the English department graduate students are predominantly women, so this larger group is more accurately represented by an all-female sample
- d) perhaps most importantly, a number of hitherto out of print and difficult to obtain source texts are now becoming available on the Internet, at sites such as the Victorian Women Writers Project and the Brown Women Writers Project. Economic factors suggest these documents by women authors will never be widely available in print, but are available electronically. So women hoping to work with these materials have a potential interest in improved forms of electronic access.

**Book Skills
and the Design of the Electronic Book**

Focus Group Questions

Cognitive

What leads you to read a book?

What do the books you like have in common?

Affect

What is the difference between the experience of reading a book and the experience of dealing with other sources of information and entertainment, such as movies, television, or the internet?

What do you like about books?

Cultural

When do you want reading material in a form other than a book?

Do you consider books to be a part of your lifestyle?

Interpersonal

Are books a part of your social life: are you a member of book discussion or reading groups, or do you lend or borrow books, or recommend books or get books recommended to you?

Physical

If you currently own or use an electronic book like the Rocket e-Book, Softbook, or Everybook, what do you think of them?

Physically, what would it take for you to choose an electronic book over a printed book?

Thank you very much.

Figure 4: Focus group questions

Originally it was my intention to use only women graduate students from the Department of English, but when I was unable to obtain an adequate selection of participants, I expanded the study to include women graduate students from the Department of Art and Design, where I found a couple of people who were willing to afford me the time and mental energy required.

One of the primary experiences I take with me from this project is the sense of difficulty involved in recruiting participants from a given sample universe. My problems were probably more acute than they needed to be in that my cohort in this case consisted of overworked people on a tight schedule, and I was not astute enough to find a lull in their workload nor organized enough to provide a lead time of more than a few weeks.

However, a longer lead time would not necessarily equate to a more successful recruitment, and I have been given to understand that focus group recruitment often relies on the availability of honoraria, which can at least to some extent recognize in a more tangible manner the not insignificant commitment of resources called on from participants (Greenbaum, p. 114).

Focus group procedure

Each of the focus groups was structured around a set of questions that were distributed to each participant along with the survey, to provide an overview of the field before entering into the discussion.

The discussions that actually took place, however, ranged quite freely, and the moderator did not discourage any particular train of thought, preferring to try to establish an atmosphere that was relaxed and relatively informal. The results were gratifying in that the participants consequently seemed to take quite a bit of responsibility for the discussion, and used the chance to cover a wide range of related topics.

Physical space

The two focus groups were held in the same room, one as an afternoon session and one in the evening a few weeks later. In order to help establish a sense of common purpose, a room was used that was quite a bit larger than necessary, and a small circle of tables and chairs was deliberately formed near the front of the room, under a sign on a moveable chalkboard establishing that this was the focus group on book skills. Edward Hall suggests that this placement of people, where they are seated to talk across the corners of tables, provides for an optimally sociopetal environment (Hall, p. 102). Refreshments were also provided.

The room chosen was a classroom at the University of Alberta, which forestalled any personal connotations that might have been associated with holding the focus groups at a private dwelling or office. Ideally the sessions might have taken place in a library, or at least included a number of books that were conveniently placed for handling by the participants, since one of the objections to focus groups is that they are often conducted in an environment that bears no resemblance to the one in which the materials under discussion are actually used (Wiseman et al., p 2). However, I decided that it was more important to have refreshments available, which would have been impossible in a library; concerning the provision of some books, I simply failed to make the necessary preparations.

The room was adequately soundproofed, which has also been identified as a significant factor in removing unwanted distractions from the focus group setting (Greenbaum, p. 71).

Investigator as moderator

For this pair of focus group sessions, the moderator was also the principal investigator. The literature on psychological research advises against the investigator personally conducting either interviews or focus groups, primarily because of the influence that can be exerted even unconsciously by a person who has a strong investment in the topic

under discussion. There is some debate about moderator continuity, with some focus group experts favouring the use of the same moderator in all the focus groups for a given study (Greenbaum, pp. 55–56). Other authors feel that ideally each group would be conducted by a different moderator, with the moderators differing in some aspect that might be considered germane to the topic under discussion (Barber, pp 47–52). However, enlisting the assistance of even a single moderator poses a number of logistical problems, and within the time and budget constraints posed by the project the decision was made for the investigator to serve as moderator.

The moderator therefore differed in gender and was slightly older than most of the participants. There is some problem with his conversational style, as shown in the transcripts, in that he had a tendency to complete other people's sentences for them and to prompt in ways that were not always neutral. These flaws were compensated for in some cases by the participants, who seemed willing to both correct the moderator's interpretations and to contradict him on several occasions.

It is also worth remarking that there is quite a high degree of similarity between the survey results and focus group results. One possibility might be that the investigator was influenced by the results from the survey in conducting the focus groups. However, since the survey was not analysed until after the focus groups were conducted, this effect could not have been present.

Participant attitudes

As might be expected with people selected from a cohort of graduate students, especially from the Department of English, the focus group participants displayed enthusiasm about, affection for, and a strong personal commitment to conventional bound books. In discussing books their voices often thrilled with expressed emotion, and they seemed happy at several points to identify specific titles and authors. Their attitude might be summed up by one of the participants, who remarked: "Because we are obsessed with our books, really."

The focus group participants were also not generally inclined to instant agreement with each other. There seemed to be the kind of academic slant to their discussion which one might hope for among graduate students, where the tendency was to question significant statements rather than simply accepting them at face value. The transcripts are replete with small statements of qualification, confirmation, and even outright disagreement.

The process of focus group transcription

The transcripts (see Appendix B) were made from audio tapes of the focus group sessions. There are some fundamental caveats to be foregrounded about transcription from audio tape. These fall under the categories: efficiency, accuracy, completeness, and confidentiality.

Efficiency

Transcription is very time consuming, taking hours to complete. Stanley Varnhagen, who manages surveys for the Academic Technologies for Learning centre at the University of Alberta, suggested that for larger groups it might be simpler to have an audio tape available for reference, but to rely for the most part on the work of an additional person in the room whose job it is to take notes.

Accuracy

There is also a somewhat technical question about listening to people's spoken voices and accurately typing what they say. I found repeatedly that in going back over a section of the tape I would have slightly modified the speech from its original, usually by ignoring repetitions, but also through other processes of smoothing spoken language into a typed format. Some of that tendency to modification derives from the way the human brain processes speech – we basically retain meaning and discard details, and we do it within a framework of a few seconds (Baars, p. 78).

What these subtle changes and omissions mean for the text is that the degree to which the various members of the group are influencing each other is not necessarily as obvious in writing as it is on the tape. Communicative agendas are broadcast through guttural noises and tonal inflections which have not been for the most part included in the transcript, since there are no standard conventions for their transcription. There are also quite subtle but I think significant individual variations among speakers. For instance, a sound that one participant will make to indicate agreement will be very similar to a sound that another participant – or even the same participant at a different point in the conversation – might use to mark continuing attention and encouragement. In transcription both these sounds might appear as something like “Uh huh,” but there is no way to disambiguate the communicative intention from the written form.

Another difference to keep in mind is that transcription to text is necessarily linear, with one speaker following another, whereas in reality there are often several people speaking at once, and it becomes the job of the transcriber to decide who gets represented as having spoken first, when in fact they should all appear somehow simultaneously.

Completeness

The transcribed text on its own is not really a complete representation of the entire picture. There are pauses, for example, which aren't indicated in the transcript, and which would require some kind of convention to be useful. It might be possible to simply cite the duration of pauses and leave it to the reader to infer their significance. Or some sort of explanatory footnotes might be included to explain what was going on during pauses in speech. But for simplicity's sake I've simply left pauses unmarked. I have, however, indicated laughter or noises made in agreement.

Spoken sentences also include subtleties of intonation and presentation that aren't readily transcribable, since we have no written convention to indicate that someone drew out one word to indicate mental reservation, or looked out the corner of their eyes while speaking, in order to suggest irony.

Confidentiality

The ethics standards at the University of Alberta require that participation as subjects in research projects be kept anonymous, so no actual names are used for the

participants in the following transcriptions. But more than straightforward identification, there are conversational details that come up in the course of discussion which clearly mark the identities of the participants. What the efforts to maintain confidentiality are trying to achieve, as Stanley Varnhagen puts it, is the sense that the participant's answers will not come back to haunt them. As a result, several details that might compromise confidentiality have been omitted from the transcripts, with the omission being marked by three asterisks.

Although perhaps necessary, to some extent the provision of anonymity smacks of injustice, since the participants in this study deserve public recognition and credit for their time and insights. On the other hand, the participants in this study sometimes spoke quite unguardedly, and they may have been more restrained if they had not been assured at the beginning of the session that their anonymity was going to be protected.

Transcription analysis

The percolation of 31,000 words of conversational data into a set of cogent principles for the design of anything is not a straightforward task. In this case it inevitably involved many judgement calls and the summarizing of material that was in some instances only peripherally related to design concerns and in others was enmeshed in dialogue that could not easily be disentangled for synthesis. There is no way to guarantee that valuable insights were not overlooked or lost, or that insights that were garnered were actually invalid for reasons of either being taken out of context, or extrapolated beyond a reasonable point, or were in some cases perhaps simply mistaken in their understanding of the point the speaker was trying to make.

Since the unit of analysis was the dialogue, the procedure adopted was to extract sections of the transcript – with occasional excision of phatics – in order to reorganize the one hundred and eighty minutes of taped conversation into a set of topic areas that were addressed by various interlocutors. No particular attention was paid to the identity of the speakers, although as a general rule any informational comments or statements of opinion made by the moderator were discarded at this stage, and in all cases the attributions were preserved, although the same numbering system for speakers had been used in both focus groups, so after reorganizing it was not always clear what comments had been made in what group.

This intermediate stage of analysis served as an organizational platform on which the summaries of statements on various topics were written. Since the complete transcriptions are available in Appendix B, I did not think it was necessary to reprint the statements that were clipped and reorganized, but have included instead only the summaries.

The summaries are an attempt not only to indicate the opinions that were presented, but also to give some sense of the degree to which a particular viewpoint was either shared or disavowed by the other participants. No design implications are explicitly drawn within the summaries themselves, since the implications have been distilled out into their own section.

Summary of focus group discussions

This section is divided logically into two parts. The first part deals with statements made with regards to questions that were more properly part of the survey than the focus group sessions. The second part is the summary of the focus groups proper.

Survey-related statements

Although the survey was to some extent independent of the focus group discussion, the tape was left running while participants discussed the survey questions in the course of filling the survey out. The following statements derive from that discussion and from points raised in the course of the focus group proper rather than from the survey forms.

Demographic results from the focus group participants are included in the discussion of the survey – they did not, of course, write answers to the focus group questions.

Reading location

On more than one occasion participants discussed seeing people reading school work while at the gym, and expressed doubt as to their being able to learn in that environment. Several people talked about reading in the bathtub, and indicated that there is a class of more or less disposable books that are selected for that purpose. Participants who do not read in the bathtub had different reasons for their aversion: one felt no books were disposable enough; another felt that reading was too work-related and therefore inimical to relaxing in the bathtub. More than one participant spoke of the pleasure of reading in bed.

Reading position

One participant spoke in detail about her practise of reading in bed, describing it as including a variety of postures – sitting, slouching, rolling from one side to another, and intermittently getting up to walk around. She associated lying down with reading for pleasure rather than for work, which was done at a desk.

Book ownership

One participant was struck by the fact that her parents, who she considered frequent readers, had never collected a personal library, but were primarily library patrons instead.

Books as gifts

Several participants stated that it was their custom to receive books as gifts, and more than one provided wish lists of books to people who were likely to buy presents for her. Gift books tended to be more expensive titles, often in hard cover.

Book borrowing

Some participants felt that graduate school had changed their library use pattern from relatively heavy leisure use to almost entirely school-related use. The same change had not occurred, at least for one participant, during her undergraduate degree.

Focus group questions

The following questions were discussed in both the focus groups. Participants were provided with a context for the discussion as well as printed copies of the questions, so they were able to consider the overall shape of the session.

What leads you to read a book?

The focus group participants in both sessions differentiated between work or study on the one hand and leisure on the other. They suggested that choice was primarily a factor in leisure reading, and that they tended to select books based on recommendations from others or to read books which had been received as gifts, although one participant also mentioned that she looked at other people's bookshelves for signs of books that had been heavily read, as a form of recommendation.

Cover design was considered significant in making the choice, as were reviews, and so was familiarity with the author's previous work. Participants did not agree on the importance of the content of the book jacket or of copy printed on the covers, or on the significance of book awards – some considered these items important in choosing books, while others did not. Good scholarly apparatus was also indicated as a deciding

factor in favour of a particular edition, and paper quality was cited as another factor, especially in choosing between different paperback editions.

Cover design

In particular, the participants in the first focus group spoke of the kinds of covers that appealed to them. One person suggested “new wave” as a defining characteristic, and cited as examples the covers for Jane Urquart’s *The Underpainter* and Claudia Casper’s *The Reconstruction* (see Figures 5 and 6). They laughed at the Oxford Classic series, with its reprints of famous paintings on the upper board.

Apparatus

One participant in particular suggested that she was strongly swayed by the availability of good textual apparatus (footnotes, index and so on), to the point that she would buy another copy of a book she already owned if it had a scholarly introduction by a recognized academic. She also cited the importance, especially for books by women writers, of a chronology, as well as a good text and plenty of footnotes. Other participants expressed their regard for a good bibliography, and everyone liked indexes. Tables of contents were also described as a decisive factor, in cases where the choice to buy a book or not was hanging in the balance.

Classes of books

One of the participants in the second focus group spoke at some length of the difference between books that are collected and books that are disposable. The former class included primarily trade paperbacks with a higher quality paper and preferably a matte cover finish. The disposable class included paperback bestsellers, preferably as small and light as possible and poorly printed on poor paper as an indication that they belonged to the disposable class of books. For this participant, whose father collected first editions, hard cover books were intended for the collector rather than for readers.

What’s the difference between the experience of reading a book and the experience of dealing with other sources of information?

Participants agreed that the role of the reader in dealing with a book was quite a mentally active role, that texts necessitated engagement and interpretation. They did not agree as to the passivity involved in watching movies, with some participants using words like “brainwashing” and “helplessness” to describe certain movies, while at least one participant spoke of bringing critical tools to bear on the experience.

One participant spoke to the physical freedom of movement inherent in reading a book.

I think because in many ways it’s more active – it’s a more active engagement, both intellectually, in the – if you’re reading a fictional novel, you’re creating the world in your own mind, and physically, you’re turning the pages, you’re sitting, you’re – you can move around, I can lie down, I can sit up, I can walk up from my room. I can put it down for five seconds to brush my teeth and come back and pick it up again.

Reading a book was characterized as basically a solitary activity, which differentiated it from the social character of movie watching; conversations about books were therefore considered more intimate than conversations about movies.

Participants also mentioned some of the physical characteristics of the different experiences, including the fact that books were more portable.

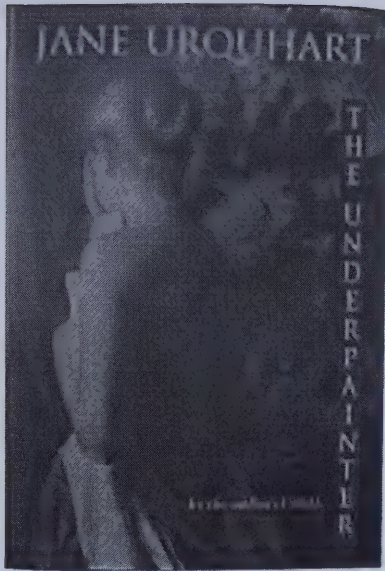


Figure 5: The front cover of Jane Urquhart's *The Underpainter*

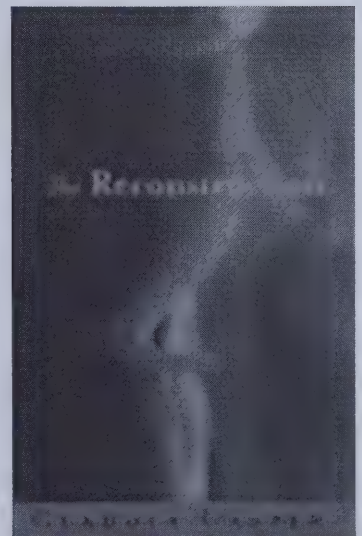


Figure 6: The front cover of the trade paper edition of Claudia Casper's *The Reconstruction*

Movies

Participants did watch movies based on their favourite books, although they were in general critical of the result. Some adaptations were faulted by the first focus group for obvious sentimentality, and for being overtly manipulative of the audience. There was some discussion of the difference between authorial manipulation, which was characterized as clever (with a certain degree of self-mockery on the part of the participants for accepting the bias of their field – English literature), and directorial manipulation, which was seen in some cases as clumsy or even inadvertent.

The first focus group also addressed the role of money as an incentive for authors and directors, speculating that blockbuster directors and bestselling authors might be more willing than their more artistic colleagues to accommodate their work to the tastes of the popular audience. To disassociate financial considerations, however, from the discussion of authorship, was clearly seen by one participant as an investment in the romantic idea of the starving artist, rather than in facing the reality of publishing.

Concerning the difference between the media, participants in the second focus group suggested there was a smaller degree of evocation possible in films than in books, that books were able to provide more detail than film, and to evoke more sensory responses. Patrick Suskind's *The Perfume* was cited as an example, in which the author addresses the reader's sense of smell in a way that was considered impossible for a film. One participant spoke to the problem of films positing a single kind of viewer, whereas with a book the reader was seen as having more freedom to choose a stance toward the text.

Documentaries

Participants generally responded in favour of educational channels and documentary films, citing in some cases specific examples that they had enjoyed and learned from. One member of the second focus group differentiated between documentaries with and without an explicit narrative, preferring the former in that it provided a framework and some continuity that might otherwise have been more difficult to achieve in such a predominantly visual medium.

Another participant spoke to some of the problems inherent to documentary filmmaking. The first was the problem of the lack of scholarly depth, which she saw as fundamental to documentaries, in that the amount of content possible in a two hour film might only translate to fifty pages of transcript⁶ – which would be a fairly superficial treatment in writing. The second problem had to do with the provision of visual material which was both appropriate to the topic at hand and still interesting: "sometimes I find that the visuals trivialize the text." There was no comparison, in her mind, between what could be learned from a book and what could be learned from a film. The film was laughable by comparison.

"It's pandering. It's interesting, and fun to watch, and sometimes very valuable information. . . but you can't compare it to. . . what you could read in a book."

News

In the first focus group the participants discussed at some length the relative merits of newspapers, magazines, and television as sources of news. One of the participants explained that she habitually compared the media, and had come to the conclusion that while newspapers were slightly more accurate than television, none of the media news could basically be relied upon as valid. As evidence she cited cases from personal experience where inside information delivered quite a different version of events than was reported in the press. She also mentioned the tendency of coverage to adjust itself

⁶ In fact this is probably an underestimate, although the point is still valid enough. The standard script length for a 90 minute feature film is between 110 and 120 double spaced pages in Courier.

to shifts in popular opinion, so that negative coverage could subsequently reverse itself and turn positive depending on its reception. Another participant pointed out that there is an understood hierarchy of reliability and authority even among the different newspapers.

Concerning the accuracy of news reports, one participant suggested that the global connections of E-mail were providing an alternative means of gathering intelligence on remote events, although it was recognized that E-mail reports might not be any more accurate than official ones.

The Web

Participants were expert Web users, with a variety of tips about using the Web. For example, the participant who worked with the Canadian Encyclopedia pointed out that for more reliable sources of information on the Web she looked for sites with a URL ending in ".edu" or which belonged to specialized institutes. Another participant spoke of news site archives and reporter biographies, which could be accessed to research the history of a particular topic's coverage. The Web was also lauded for providing information that might not otherwise be available on international events.

Participants in both focus groups were also familiar with newspapers on the Web, and found them a reasonable alternative to printed papers since they did not necessitate reading long passages of continuous text.

Shortcomings of the Web included the necessity for reading off a monitor, the slowness of response, and scrolling. The Web was also criticized as a source of information that tended to be short and piecemeal.

Whereas a book you've got the time and the space to really elaborate. On an idea or a theory or whatnot. And it also gives you the, the mental space and time needed to say, well, okay, but you know what – that's *really persuasive* when I first read it, but – coming back to it you know I don't, I don't think I agree or you know, to take it apart.

One of the participants in the second focus group brought forward the idea that the strength of the Web is its interactivity - which necessitates a different kind of content from the static form of the printed page. On the issue of interactivity, some of the other participants addressed the existence of personified help dialogs – animated icons with faces – and suggested that at the present level of technology they are more an annoyance than a benefit, since their occasional ability to offer intelligent help is occluded by the high frequency of their unhelpful suggestions.

Monitors

No one liked reading from a monitor. One participant suggested the basis was at least in part physiological, in that the viewer's blink rate drops and their eyes dry out; another felt that the vertical position of a page on a monitor was a source of discomfort. Another limitation involved the fixed nature of the desktop computer, which made multi-tasking more difficult, although not impossible.

One participant also mentioned problems with annotating electronic documents: "I can't make marks on it," while another disliked the fact that Web browsers currently print entire documents rather than individual sections.

Participants were unanimous, nonetheless, in preferring to print out documents of any length, both for reading and subsequent access, although they were willing to scan off the monitor. Some felt that information read from a monitor was not mentally assimilated as readily as information from a printed source.

When do you want reading material in a form other than in a book?

Participants preferred photocopies to books in cases where only a small portion of the book was necessary for a particular purpose, or in cases where the book itself would be prohibitively expensive. Photocopies also had the advantage of being susceptible to underlining and annotation without the stigma that attaches to defacing a book. They had the drawbacks, however, of being difficult to organize and search.

Another alternative medium was the newspaper, which was considered a source of current information on events within the city, and as providing material for conversation. Web newspapers were also discussed and considered a good and viable alternative since the individual articles are short enough for reading off a monitor, with the advantage of being searchable.

What do you like about books?

People were variously enthusiastic about new books and old books, hard cover books and trade paper books and disposable paperback books. Details included the smell, the crispness of a new book, the comfortableness of a book that one has read repeatedly.

Advantages of hard cover books

Hard cover books were praised by some of the participants for their durability and solid feel, which were particularly important in the case of reference books. Hard cover editions were also prized for their appearance as display objects, and one of the participants liked dust jackets.

There was also some discussion of books as valuable to the collector, especially in the case of first editions, and of hard cover books as items for which people might feel a certain degree of respect.

Advantages of soft cover books

One of the main advantages identified for soft cover books was that they are lighter to move in quantity. In the words of one participant: "Everyone hates moving an English major." One participant – whose father collected first editions – found hard covers limiting in that they necessitated such careful handling. She had a marked preference for paperbacks as being more portable, easier to handle, amenable to one-handed reading, and generally requiring less respect from the reader.

Are books a part of your lifestyle?

Participants generally considered books an important part of their lifestyle. Books conveyed status, had lasting value, and were an indication of personality: "I care more about the books I own than what car I drive."

Books as tools

Participants felt that an electronic reference book would be helpful, especially if it were easily updated and searchable. One participant mentioned the usefulness of tagging and word frequency analysis software. More than one person expressed doubts that an electronic book could ever be read with pleasure, pointing out that if nothing else it would have the wrong smell.

In the second focus group there was some discussion of the culture of books – the suggestion being that books are no longer perceived primarily as tools.

Book collecting

Participants felt in general that there was a sense in which books are parts of collections that are an expression of identity, in much the same way that other

collections express their collectors. They did not feel that one book could fill this niche. There was some discussion of book collections vs. CD music collections, and some agreement that the reading device could never be successfully disassociated from the titles for people who love books, although it might be a possible solution for a different cohort – perhaps those who were able to invest emotionally in a CD music collection, for example.

Participants also spoke of provenance, where books acquired value through having been owned by someone important in the past, whether a family member or whoever. Some books were also more valuable for representing in a physical artifact the effort that had gone into reading them, and books in general as signifying the owner's predilection for reading and learning.

In this respect one participant expressed doubt that any solution would be viable that involved erasure and over-writing. She felt that perhaps it was the relative permanence of a printed book that was a primary part of its value.

Respect for books

One of the participants in the second focus group spoke of having respect for books, which necessitated a number of specific behaviours. She never folded corners of pages or kept books in the bathroom where they would be subject to damage from excessive moisture. She was also in the habit of making additional dust jackets out of brown paper to protect the covers – an activity which another participant claimed to have been part of her education in elementary school, where the children made similar covers to protect books owned by the institution.

Are books a part of your social life?

Participants in general felt that books did play a role in their social lives. They all borrowed and loaned books from their friends, and they all recommended books and had them recommended. They all discussed books with friends and colleagues. In addition, more than one participant spoke of the importance of reading books as a deciding factor in the establishment of personal relationships. It was felt that discussions of books helped both to establish characteristics of other people and to express one's own personality. One participant explained carefully that for her, at least, the choice of someone else's reading material was not as important an issue as the fact of the person's being a reader or not.

If you currently own or use an electronic book like the Rocket eBook, SoftBook, or EveryBook, what do you think of them?

The focus group participants had very limited experience with electronic reading devices. One had seen the Rocket eBook on TV. She thought it was horrid in the same way a Palm Pilot is horrid – that is, it was too much like a computer. She felt that the design features that had been included to make it appear more like a book (a flap that resembled a cover and a button to turn virtual pages) just contributed to its repulsiveness.

Another participant mentioned the cost, which rendered the current electronic books too precious to be handled comfortably. The owners, she felt, would constantly be worried about losing or damaging the reading device.

What would it take for you to choose an electronic book over a printed book?

Some participants felt that they might invest in an electronic book for the sake of its novelty, especially if it included some innovative software like an intelligent guide or agent. Others emphasized the importance of being able to try the device out without the necessity for committing to the expense of purchasing it. One participant was adamant in refusing to even consider any solution that necessitated purchasing

proprietary texts, primarily on the grounds that the publisher would not be competent to choose the titles she would want.

Replacing a conventional library with an e-book

The display of books on shelves was considered a very important feature of books.

And it's just such a great feeling, it's like the first time you get into a good library, and it's like, "look at all these great books, I could read any book on the shelf."

Participants who had books in storage through lack of apartment space felt the separation from their personal libraries as a hardship. One of the advantages of shelf display is that owners could spend time reviewing their collections to remind themselves what books they had, and to note logical gaps where additional titles might be wanted.

In addressing what role an electronic book might play in relation to the personal library, it was generally felt that it would be a supplement only, which might provide additional tools or functions but which could never replace the collection.

Outright supersession of bound books by electronic books

Participants in the first focus group discussed people they knew in the computer industry who personally felt there was a strong likelihood of conventional bound books being replaced by electronic books. They did not share this belief, ascribing it at once to a taste for the apocalyptic in our culture and a marketing strategy. One participant cited an authority on the recent increase in book sales in the UK, and others pointed to the recent success of large book retailers like Chapters and Amazon.com. Another remembered an article explaining that some publishers had increased sales of conventional bound books by putting electronic copies of their books on the Web.

Complete works in one cover

Respondents generally felt that the collection of many books in one cover was not necessarily an advantage. Their experience with print versions was not a positive experience, since the size rendered the books cumbersome and less pleasurable to handle and read. They agreed that a searchable collection would be useful in class, but worried that the publisher would not be able to select appropriate combinations for inclusion.

If I'm getting something like that, and putting the money in for it, by God, it's got to work for me. If it sits on a shelf – if I buy a CD player, and it sits on a shelf and I never play anything on it, every time I look at it I'm going to kick myself.

Replacing course packs

A course pack is a stack of articles assembled for a particular class, usually by the instructor, although additional material can be added by the graduate students in the course of their seminar presentations. A course pack might contain offprints from microfiche, printouts from the Web, and photocopies from various printed sources. The quality varies dramatically even within a single pack.

Participants were unanimous in their praise for course packs, in that they reduce the cost and bulk of material necessary for each class. But they were almost equally unanimous in their sense of the shortcomings of this method of distributing diverse collections of material, which include storage, organization, and subsequent search and retrieval. In general they welcomed the idea that an electronic book might provide a more useful alternative means of distribution, provided that the cost was not prohibitive.

The characteristics of a viable course pack replacement were that it should be searchable and amenable to annotation. It should also allow the user to select the items to be included.

There was also some discussion in the first focus group of the usefulness of being able to connect the electronic book to an overhead projector. One participant had attended a university where every class was taught with PowerPoint, and she felt that the presence of too much technology in the classroom could be dehumanizing.

Organic LEDs (OLEDs)

Participants responded favourably to the idea of a display technology that used reflected light, especially if it also eliminated glare. They also felt that motion and sound would be advantages, which differed from the opinion held by survey participants.

Large size sheets

In discussing the possibility of a folio-sized reader, participants expressed doubt as to its value. Only in the case of art books would a large reader be necessary, and then only at high resolution and with the right look, feel, colour correctness, and smell.

Cost

Cost was a major limiting factor for these participants. An electronic book that was too expensive would be seen as prohibitive in terms not just of the initial investment, but also of subsequent precautions that would be necessary against loss or damage. If individual titles cost less than their print equivalents did, the odds would increase that the participants would consider using them.⁷

On the other hand, their investment in books for courses is considerable. It was estimated that a graduate student in English spends a minimum of \$200 and an average of \$500 per class for books.

Distribution on CD

There was some discussion in response to the suggestion that if CDs were used to distribute electronic books then the CDs might serve as artifacts. The participants felt the difference was too great between music collections and book collections for the analogy to hold. Various details were emphasized, including the fact that books are quite variable in size and shape, while CDs are identical in size; that books are made to be handled while CDs should essentially not be touched; and that frequent readers are used to being surrounded by books but not by CDs: "I place a lot more stock in, in what the books and the bookshelf looks like than what the CD case does." It was also pointed out that provenance is important for books but not for CDs.

Moving a library

For participants who had moved to Edmonton from other parts of the world or from other provinces, the separation from all or part of their personal libraries was considered a hardship. They were of mixed opinions as to whether an electronic book could help fill the gap, with some participants thinking it might help, while others felt the actual printed books would be necessary. Participants agreed that books in quantity are heavy to move and therefore make moving more expensive.

Not like a machine

More than one participant mentioned that a device that operated silently would be better than one that made noise. Several participants mentioned the importance of the way books smell, including both new books and old books. It was generally felt that

⁷ Titles for the Rocket eBook are in fact somewhat cheaper than their print counterparts, although the electronic book itself is still an expensive device.

the electronic book should not resemble a piece of machinery. It should also not be so expensive as to require too many precautions in its transportation and use: “Not like a machine. Not like anything remotely like a computer.” Conversely, participants felt that the electronic book should be as much like a book as possible: “For me, if you’re going to market it as a book, I want, I want the experience of a book.”

Marginalia

Participants were unanimous in stating that the ability to mark their books in various ways was an important factor for them. The marks included both marginalia and Post-it notes. They also appreciated intelligent marginalia left by previous readers, especially if the people were related in some way or were acknowledged experts in their fields.

Potential markets

Participants in the first focus group felt that there was a viable niche for an electronic reader that would replace course packs: “Everyone doing a thesis in Canada would buy one.”

In the second focus group there was a suggestion that government departments could make good use of an electronic book as a replacement for internal rule books, which are constantly undergoing revision and updates. Factors related to emotional attachment to conventional bound books – the importance of collecting for display, for example – would be dramatically reduced or nonexistent in the case of these kinds of manuals.

Publishing in Taiwan

One of the participants, who was from Taiwan, expressed doubt that the publishing industry there produced any hard cover books, with the exception of art or coffee table books. As far as she knew, novels were always released as paperbacks.

Implications for the design of the electronic book

The following implications are drawn from the summaries developed from the focus group transcriptions. Not every discussion yielded a design implication; several discussions yielded more than one. In the former case the heading is retained and the lack of implications remarked; in the latter case the implications have been delineated as simply as possible.

The purpose of drawing these implications is to collect ideas for features that would make the electronic book more attractive to frequent book readers, without creating any foreseeable negative consequences. At this stage, however, implementation considerations are not addressed – I have included all the implications that arose, rather than filtering them for those that would seem most practical within a particular design solution.

It should also be noted that the implications drawn are tentative rather than definitive – they are based on conversation with only seven people, and in most cases represent the ideas of only one or two participants rather than consensus among the entire group.

Reading location

The focus group participants indicated that they read in a wide range of locations. The Bi Sheng should therefore be designed to be portable.

Reading position

Since participants read lying down, the Bi Sheng should not be easily damaged by falling off a bed.

Book ownership

Since frequent readers are not necessarily book buyers, the Bi Sheng should be designed in such a way as to be amenable to lending.

Books as gifts

I could draw no relevant implications from this discussion.

Book borrowing

I could draw no relevant implications from this discussion.

Focus group questions

What leads you to read a book?

Cover design

Cover design is an important factor in the decision to read a particular book, and the basic Bi Sheng should incorporate a minimum of title and author on the cover. Optionally included should be a cover design for each title, with a graphic design, blurbs, reviews, and information as to whether the book is part of a series. Ideally the electronic book would resemble a conventional bound book insofar as the cover and spine are concerned.

Apparatus

The Bi Sheng should privilege inclusion of scholarly apparatus for titles intended for this cohort, including scholarly introductions, chronologies, substantive footnotes, bibliographies, indexes, and tables of contents.

Classes of books

Since there are in some people's minds the two classes of disposable books and collectable books, the Bi Sheng might be developed in two formats – one intended for permanent storage as part of a collection and the other for ease of overwriting and reuse.

What's the difference between the experience of reading a book and the experience of dealing with other sources of information?

Participants listed a number of somewhat personal physical factors – turning pages, sitting or lying down with a book, the ease of marking and picking up again – which should be duplicated as far as possible in the electronic book.

Movies

Participants clearly privileged text over film, which suggests that the provision of motion and sound in the electronic book might be an optional feature for this cohort rather than an essential feature.

Documentaries

I could draw no relevant implications from this discussion.

News

The Bi Sheng need not provide news display, since current methods (both print and net) were considered sufficient in light of the usually short length of the texts involved.

The Web

Since the perceived shortcomings of the Web included the necessity for reading off a monitor, the slowness of response, and scrolling, the design of the electronic book should try to avoid or minimize these problems.

Monitors

The Bi Sheng display should be as much like a printed page as possible, and as little like a monitor as possible (see “OLEDs,” below).

When do you want reading material in a form other than in a book?

(see “Replacing course packs,” below).

What do you like about books?

Advantages of hard cover books

If the Bi Sheng is to be perceived as a valuable object in its own right, it should have a hard cover. If it is to be positioned as more disposable, it should have a soft cover.

Advantages of soft cover books

If possible, the Bi Sheng should be light enough to be held comfortably in one hand.

Are books a part of your lifestyle?

(see “Book collecting,” below).

Books as tools

The Bi Sheng should be amenable to loading and display of reference materials.

The Bi Sheng should be easily updated and searchable.

The Bi Sheng might contain tagging and word frequency analysis programs, but such provision is not essential.

Book collecting

If possible, the Bi Sheng should be amenable to collection and public display in the same manner as the conventional bound book (see “Replacing a conventional library with an e-book,” below).

Respect for books

I could draw no relevant implications from this discussion.

Are books a part of your social life?

Exchange through lending or sharing of electronic titles should be provided as part of the design solution, since these activities are significant parts of the social lives of frequent book readers.

If you currently own or use an electronic book like the Rocket eBook, SoftBook, or EveryBook, what do you think of them?

The Bi Sheng should be inexpensive, not compared to other electronic devices, but compared to conventional bound books.

Simulation of features of the conventional bound book without actual functionality should be avoided in the Bi Sheng.

What would it take for you to choose an electronic book over a printed book?

The Bi Sheng should be either developed or marketed in such a way as to make it amenable to lending and test driving.

Replacing a conventional library with an e-book

If possible, the Bi Sheng should be amenable to collection and public display in the same manner as the conventional bound book.

Outright supersession of bound books by electronic books

The Bi Sheng should not be designed or marketed as a replacement for conventional bound books, but rather as a supplement.

Complete works in one cover

The Bi Sheng should allow the user to collect complete works in one cover, but should not come with preloaded collections.

Replacing course packs

The Bi Sheng should allow for collection, display, searching, and annotation of short documents tailored for that purpose by the user.

The Bi Sheng should allow connection to an overhead display as an optional but not essential feature.

OLEDs

The Bi Sheng display should be as much like a printed page as possible, and as little like a monitor as possible.

Large size sheets

The Bi Sheng does not need to be available in folio size.

Cost

If possible, individual electronic books should not exceed their conventional bound equivalents in price.

Distribution on CD

The Bi Sheng should not use CD technology as part of the reading device.

Moving a library

The Bi Sheng should be lighter than a conventional library.

Not like a machine

The Bi Sheng should be as little like a machine as possible. In particular, it should operate silently and it should feel and smell organic rather than electronic.

Marginalia

The Bi Sheng should be able to provide the reader with the ability to annotate individual pages on the one hand, and to mark with bookmarks or Post-it type notes on the other.

The Bi Sheng should allow users to save their annotations back to the computer.

The Bi Sheng should facilitate the sharing of annotated texts between users.

Potential markets

The Bi Sheng should be marketed as a replacement for course packs and as a vehicle for government manuals..

Publishing in Taiwan

I could draw no relevant implications from this discussion.

Survey

For the purposes of extending the investigation by obtaining the opinions of a larger number of people, a paper-based survey was designed and converted to Web format for delivery. There were a total of 58 respondents, of whom 7 were also focus group participants. The majority of responses were via the Internet, although 15 responses (including 6 of the focus group participants) were on paper copies that were subsequently entered into the database.

The sample size is too small for anything like definitive conclusions to be drawn. Assuming a roughly even split of opinions, about 400 people would normally be required in a North American study, all from a single large cohort, in order for the results to be susceptible to reasonably reliable extrapolation. The sample size actually obtained would yield roughly a 10% error, assuming something more like an 80/20 split on opinions (Salant, p. 55).

One observation on the mode of survey delivery (that is, Web vs. paper) has to do with the amount that respondents were willing to write. Although the numbers are too small to draw conclusions, it was nonetheless the case in this small sample that Web respondents wrote more than three times as many words per question as paper-based respondents, and in fact some Web respondents wrote quite lengthy answers (as many as 300 words) in response to some of the questions.

Survey cohort

In general the cohort I sought to investigate consisted of frequent book readers who were also familiar with the Internet. The survey cast a wider net than the focus groups, including both genders rather than strictly women, people from a wider age range, and people who were no longer in graduate school, although most of the respondents should have had at least one degree (which did turn out to be the case).

Survey respondents were solicited by E-mail, word of mouth, and listserv. If the survey were to be carried out to an extent that the number of responses was genuinely representative of this cohort, it would be necessary to extend the duration and to invest further resources in requesting participation. Notes were sent, for example, to the graduate departments of English at both the University of Alberta and the University of Saskatchewan, but not to other universities or to other departments, although E-mail requests were made to individuals in Library Science, and personal requests were made to graduate students in the departments of Computer Science, Psychology, and Anthropology at the University of Alberta.

Design of survey questions

The survey used in this study underwent a series of five revisions, not including the conversion process from paper to Web. The first draft of the survey consisted of a set of 12 open-ended questions (see Figure 7: Original survey questions) which were subsequently refined into the 25 questions in four categories that were actually used (see Figure 8: Final survey questions). The course of revision was performed in conjunction with Stanley Varnhagen of Academic Technologies for Learning at the University of Alberta, who drew on more than ten years of experience in survey design to help. A variety of texts on the use of surveys in the humanities were also consulted, and a set of general principles was created and applied (see Appendix E: Principles of survey design).

Personal Information

Name (optional)

Age

Sex

Education

Annual income (optional)

of books in your personal library at home

of books in your personal library at work

of books in your parents' library

Questionnaire (choose a convenient time scale as required)

How many books do you read?

How much time do you spend reading books?

How much money do you spend on books?

Where do you do your reading?

- location
- body position
- time of day

Figure 7: Original survey questions

**Book Skills
and the Design of the Electronic Book**

This survey is intended to collect some basic information on how people select and use books, in order to understand what factors should be involved in the design of an electronic book.



University
of
Alberta

This survey uses the following convention:

- ☐ choose as many as apply
- ☐ choose one and only one

Book Reading

1. How many books do you read completely in a typical month? _____
- 2a. How much time in a typical week do you spend reading books to yourself (please indicate hrs or mins)? _____
- 2b. How much time in a typical week do you spend reading books to your children (please indicate hrs or mins)? _____ N/A
- 2c. Other than reading to yourself or your children, are there other ways you read books (specify)? _____

3. How many times in a typical week do you consult a book that you don't read completely (e.g. a reference book such as a dictionary or a thesaurus, or a cookbook)? _____ N/A
4. How frequently did adults read books to you when you were a child?
 - ☐ more or less daily ☐ at least once a week ☐ at least monthly
 - ☐ on special occasions only ☐ seldom or never ☐ don't remember
5. If you had your choice, would you most prefer to:
 - ☐ see the movie ☐ visit the web site ☐ read the book
6. If you had your choice, would you most prefer to read:
 - ☐ in a quiet room ☐ with background music ☐ with the TV on
 - ☐ other (specify) _____
7. How much time in a typical week do you spend reading from a computer monitor (please indicate hrs or mins)? _____ N/A

Figure 8: Final survey questions (p. 1 of 5)

8. Do you currently know about or use any of the following electronic books (check all that apply)?

8a. Rocket e-Book ☐ heard of it ☐ own it ☐ use it ☐ N/A

8b. Softbook ☐ heard of it ☐ own it ☐ use it ☐ N/A

8c. Everybook ☐ heard of it ☐ own it ☐ use it ☐ N/A

8d. other (please specify) _____ ☐ heard of it ☐ own it ☐ use it ☐ N/A

9. Out of 100% of your time spent reading books, how would you divide the following locations (please check that the sum of the numbers is 100%):

home _____

office _____

library _____

other (specify) _____

TOTAL 100%

10. Out of 100% of your time spent reading books, how would you divide the following body positions:

sitting _____

standing _____

lying down _____

other (specify) _____

TOTAL 100%

11. Out of 100% of your time spent reading books, how would you divide the following times:

morning _____

afternoon _____

evening _____

after midnight _____

TOTAL 100%

Figure 8: Final survey questions (p. 2 of 5)

12. Please divide your book reading in the following ways (each pair should total 100%):

leisure reading (pleasure) _____
 required reading (work or school) _____
 TOTAL 100%

books purchased	_____
books borrowed	_____
TOTAL	100%

time spent reading books	_____
time reading magazines, newspapers, other	_____
TOTAL	100%

fiction (books) _____
nonfiction (books) _____
TOTAL 100%

paperbacks _____
hard covers _____
TOTAL 100%

leisure library use (pleasure) _____
 required library use (work or school) _____
 TOTAL 100%

in English	_____
in a language other than English	_____
TOTAL	100%

13. On a scale from one to five, how would you rate your enjoyment of books?

○ enjoy very little ○ ○ ○ ○ enjoy very much

14. On a scale from one to five, how would you rate your enjoyment of reading from a monitor?

☐ enjoy very little ☐ ☐ ☐ ☐ enjoy very much

Book Borrowing

- 15a. In a typical month, how often do you visit the public library as a patron?
☐ 1-3 times ☐ 4-7 times ☐ 8-10 times ☐ > 10 times ☐ N/A
- 15b. In a typical visit to the public library as a patron, how long do you stay?
☐ < 15 mins ☐ 15-45 mins ☐ 1-2 hrs ☐ > 2 hrs ☐ N/A
- 16a. In a typical month, how often do you visit the university library as a patron?
☐ 1-3 times ☐ 4-7 times ☐ 8-10 times ☐ > 10 times ☐ N/A
- 16b. In a typical visit to the university library as a patron, how long do you stay?
☐ < 15 mins ☐ 15-45 mins ☐ 1-2 hrs ☐ > 2 hrs ☐ N/A
- 17a. In a typical month, how many books do you take out of any library for yourself? _____ N/A
- 17b. _____ for your children? _____ N/A

Book Ownership

For the purpose of answering the following questions, please assume that 200 books will fill a fairly large bookcase. 1000 books will completely fill a 10 x 8' wall.

18. How would you estimate the size of your personal library at home?
☐ <200 books ☐ 201 - 1000 books ☐ 1001 - 3000 books ☐ >3000 books
 1 bookcase or fewer 2 - 5 bookcases 6 - 15 bookcases >15 bookcases
19. How would you estimate the size of your personal library at work?
☐ <200 books ☐ 201 - 1000 books ☐ 1001 - 3000 books ☐ >3000 books
 1 bookcase or fewer 2 - 5 bookcases 6 - 15 bookcases >15 bookcases
20. How would you estimate the size of the library in the house where you grew up?
☐ <200 books ☐ 201 - 1000 books ☐ 1001 - 3000 books ☐ >3000 books
 1 bookcase or fewer 2 - 5 bookcases 6 - 15 bookcases >15 bookcases
- 21a. In a typical year, how many books do you buy for yourself? _____ N/A
- 21b. _____ for your children? _____ N/A
- 21c. _____ as gifts? _____ N/A
- 21d. In a typical year, how many books do you receive as gifts? _____ N/A

Figure 8: Final survey questions (p. 4 of 5)

Personal Information (optional)

22. Age ☐ <20 ☐ 20-25 ☐ 26-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ >60

23a. Education complete (please indicate all degrees completed)

☐ Bachelor ☐ Master ☐ Ph.D. ☐ other (please specify) _____

23b. Education ongoing (please indicate all degrees currently in progress)

☐ Bachelor ☐ Master ☐ Ph.D. ☐ other (please specify) _____

24. Annual income (individual)

☐ <\$15,000 ☐ \$15,000 – \$25,000 ☐ \$25,001 – 35,000 ☐ \$35,001 – 45,000 ☐ >\$45,000

25. Do you have any children in the following age groups (check all that apply)?

☐ 1-5 yrs ☐ 6-11 yrs ☐ 12-17 yrs ☐ >17 yrs ☐ no children

Figure 8: Final survey questions (p. 5 of 5)

Oversights

In retrospect, there were a number of subject areas that could have contributed to this study that were not included among the survey questions, simply because I did not think of including them. In some cases these topics were mentioned in the focus group sessions, while in others they arose in answers to other questions on the survey. These topics were:

- marginalia, annotation, and highlighting. The question might have been something along these lines, which does not explicitly ask people to confess to defacing borrowed books but does not eliminate the possibility:

Do you mark any of the books you read (choose all that apply)?

- ☐ highlighting
- ☐ marginalia
- ☐ turned down page corners
- ☐ signature or book plate
- ☐ other (specify)

- the interaction of text and image. The question would have sought some insight into the perceived role of illustration, perhaps with an eye toward varying characteristics:

On a scale from one to five, how would you rate the importance of the following?

Illustration in general

Not important 1. 2. 3. 4. 5. Very important

Full colour illustrations

Not important 1. 2. 3. 4. 5. Very important

Black and white illustrations

Not important 1. 2. 3. 4. 5. Very important

Photographs as illustrations

Not important 1. 2. 3. 4. 5. Very important

- opinions on the provision of optional features. Specifically the question might address the perceived importance of motion and sound:

On a scale from one to five, how would you rate the importance of the following in an electronic reading device?

Motion

Not important 1. 2. 3. 4. 5. Very important

Sound

Not important 1. 2. 3. 4. 5. Very important

Survey conversion to Web format

Although the original design work on my survey for this project was based on the assumption that the survey would actually be delivered on paper, at an intermediate stage it came to my attention that we could fairly reasonably acquire the technical capacity to use the Web as a distribution and collection path.

Advantages

The primary advantages of a Web format derive from the simplicity with which the survey can be distributed and the results collected. In the case of this project, I solicited survey respondents in three ways: by word of mouth, by E-mail, and through postings to listservs. This method, which involved communicating my request and the URL of my survey, replaced the paper-based alternative of either physically handing out copies of the survey or else mailing them to potential respondents. In practical terms, it saved both time and money.

Disadvantages

One disadvantage to a Web survey is that it requires a reasonably large computer to function as the server, with a relatively high bandwidth fixed network access (as opposed to, say, access via a dialup line). There is also an expenditure for software (in this case Filemaker Pro and MS-Word) and some technical expertise that needs to be available in the form of database Web implementation.

Issues

There are a number of issues that needed to be addressed in converting from a paper-based survey to a Web-based one. These issues include:

- platform decisions
- choices of field display (radio buttons, check boxes, pull-down menus, text fields)
- error checking on input
- data types
- user instructions
- contingency instructions
- Internet service provider

Platform decisions

A Web-based survey requires two pieces: a database to collect the results and a Web page as the front end. I chose to use Filemaker Pro on the Mac and to code the HTML by hand in MS-Word. Alternative workstation-level databases would include MS-Access under Windows, and FoxBase under either Windows or Mac.⁸

The platform decisions were based on keeping the logistics as simple as possible. Filemaker Pro is less expensive than FoxBase, I had used it quite extensively on earlier projects, and it now includes a number of proprietary Web tags that allow fairly straightforward access to the Web. A Windows solution was less likely because there are no Windows machines in the VCD lab.

The choice of Web design software was similarly motivated by expediency. There are quite a number of Web design packages available, but the vast majority of them perform automated error checking and are therefore unsuitable for projects that require proprietary tagging. The exception would be Claris Home Page, which accommodates the Filemaker codes because the two products are from the same company. But I am quite familiar with HTML coding and was comfortable working from a word processor.

⁸ There is also a version of Filemaker Pro for Windows.

Once the hardware and software decisions were made, it was necessary to learn the proprietary CDML⁹ tagging necessary to create the Web version of the survey. Unfortunately, I began by learning static tagging and used that method for the survey, when dynamic tagging would have had three advantages: it is less time-consuming, more flexible when it comes to making changes to the database value lists, and less prone to error (see “Error checking on input,” below). Static tags require that each possible response value be hard-written into the HTML, while dynamic tags simply insert a pointer to the value lists already stored in the database.

Choices of field display

Both Filemaker Pro and HTML support a variety of formats for data entry. The user can be asked to select items from:

- a pop-up menu,
- a set of checkboxes (which allow multiple selections), or
- a set of radio buttons (which are mutually exclusive).

The programs can also ask for text-based input in one of two formats:

- a single line of text in a space of a pre-defined length (longer answers push the left margin out of the display space)
- a small window with a scroll bar (for text of any length up to about 5,000 words).

At various points in the survey I chose to use all of the above formats, with the exception of pop-up menus, which I consider somewhat disturbing in their proclivity to jump out and surprise the user with a list of choices that were not previously visible. I find that radio buttons serve the same function as pop-up menus and are less startling.

Radio buttons are, however, a somewhat special case, in that once the user has made a choice from the set of radio buttons available, there is no provision for simply unmarking the selection and leaving that question unanswered. It seems to me that in filling out a survey it is sometimes the case that people want to ignore certain questions which might seem to them inappropriate, or for which their choice is uncertain, and that the radio button in not being amenable to deselection is problematic. My solution was to allow an N/A selection as the last option in all the questions that used radio buttons, so that choosing a button did not commit the respondent irrevocably to answering that question.

Error checking on input

In the pretest version of the Web survey, I had configured the database in such a way that questions with predefined lists of answers checked those answers against a value list. But because the HTML was written in static code (that is, it duplicated the value lists rather than bringing up their values dynamically from inside the database) it was possible for typographical errors to render the page unsuitable for submission.

One method of testing for this kind of error is to fill out the survey in every possible combination and try submitting the results, which is both very time-consuming and still not fool-proof. I elected instead to try the survey out with a small group of pretesters, the first couple of whom ended up unable to submit their answers for precisely this reason: one of the fields contained a typographical error in the HTML version of the value list, so that it did not match the database version that it should have matched.

⁹ Claris Database Markup Language

The solution I chose is to disable error detection altogether at the input stage, so that typos are acceptable and the survey respondent does not suffer unnecessary frustration in the process of submitting the form.

Data types

A similar principle holds for constraining the type of data entry. For fields expecting a number, for instance, it is possible to require that the user provide an actual number rather than a text-based answer. Here the question arises as to whether the onus should fall on the survey respondent to be reasonable in supplying their answers, or whether it should be on the survey designer to allow all kinds of answers and subsequently groom any that need changing prior to tabulating the results.

I chose to allow answers of all kinds by changing all data types to be as flexible as possible in the database (that is, of type “text”).

User instructions

The user instructions for this survey occurred in two places: in the original requests for participation, which provided people with the URL and a brief description of the project, and on the Web page that contained the survey.

The request for participation took a number of forms based on my relationship with the various correspondents, but the basic elements are present in the version that was sent for inclusion in the English Department graduate student newsletter:

Book Skills Survey

Stan Ruecker, a graduate student in the Department of Art and Design, kindly requests faculty and graduate students of English to complete a survey on their use of books. The information collected will be used in a thesis on the design of a better electronic book. The survey is Web-based and will take about half an hour to complete. It can be found by setting your Internet browser to the following URL: <http://129.128.134.43> between now and midnight, March 5th. Thanks.

The following text appeared at the top of the Web survey page, providing the participant with some context and suggestions for how to proceed:

Book Skills and the Design of the Electronic Book

Principal investigator: Stan Ruecker

Department of Art and Design, University of Alberta

This survey is intended to collect some basic information on how people select and use books, in order to understand what factors should be involved in the design of an electronic book.

It will likely take you at least half an hour to complete the survey, so please begin when you have the time to spare: at this point I have no mechanism to allow you to return to an incomplete form. Some of the questions that ask for longer text answers are at the bottom, so you might want to scroll down there to get an idea of the length.

I should also mention that although this survey page is not registered with any of the search engines (and therefore isn't actually public), neither is it guaranteed secure. I hope that won't be an issue for anyone, since your answers are given anonymously anyway.

Once you've completed your answers, please use the “Send Information” button at the end of the survey in order to send your answers in to the database at this end.

Thanks in advance for showing up.

At the bottom of the survey were the buttons to either clear the form or else submit the result, as well as the contingency instructions.

Contingency instructions

Ideally the respondents should have been able to employ some alternative means of submitting their answers, in the event of some problem arising with the server that would make the normal downloading procedure impossible. Unfortunately, the CDML format tags used to connect data fields to Filemaker Pro do not allow the user to globally select the contents. So all that could be provided for contingencies was in the form of the following instructions and apology:

Thank you for your time, and please don't forget to push the "Send Information" button below. You might want to know that pushing that button will also clear the form.

In the event of something going wrong so that you can't submit the form, I'm afraid I haven't figured out a way to save your responses. Saving the page will only save the questions, but not all your work. You could individually copy and save the text answers you wrote and mail them to me. But that's all I can suggest. Please let me apologize.

Demographic implications

There is also a demographics issue involved, in that a paper-based survey presupposes a fairly low level of technological literacy, whereas a survey written on the Internet requires that respondents have access to a computer with a Web browser. It will also tend to bias the sample toward people for whom Web surfing is a comfortable activity, and away from people who are unfamiliar with the Internet or simply uninterested in it.

In the case of this particular study I was looking for respondents who were both frequent readers of conventional books, but also already computer literate, so introduction of the Web as a factor in the survey process should have had little effect on the demographics. In fact, prior to identifying a Web survey as a viable option I had intended to use E-mail as the survey vehicle. But a Web survey has the advantage over E-mail of not requiring that the data be re-typed into the database, since each respondent in effect creates a new database record.

Another issue to be considered in conversion to Web format is the problem of identifying the cohort who actually responds. In some respects this is not entirely different from the problem with mail-out surveys, which might end up being completed and returned by anyone at a given address, rather than by the particular person the surveyor intended. To some extent this problem was reduced in the case of this survey by the method of requesting responses from individuals via E-mail, rather than through making the survey generally available to the public at large. The E-mail message contained the URL, which would otherwise not be available to someone using one of the Internet's standard search engines.

Internet service provider

One other consideration that needs to be addressed in attempting to convert a paper-based survey to a Web-based survey is that the computer that is to be used as a server has to be available around the clock for the duration of the survey, which in this case was almost three weeks.

Needless to say, an ethernet or other permanent network connection is a necessity, since a dialup line via a modem would not be sufficiently robust. The obvious choice might seem to be to use a commercial or university-wide Internet service provider, with a dedicated Web server. However, it would be necessary to obtain permission for the

server to run a copy of Filemaker Pro in order to collect the data, and the server version of the software is considerably more expensive than the workstation version.¹⁰

So unless a service provider is available that is already running the appropriate database, a less robust but adequate alternative is to run the survey off a workstation and publish the IP address as the URL. That was the solution used in this case, along with a sign on top of the computer begging the indulgence of the other users in the graduate lab of Art and Design.

Summary of results of survey

The survey consisted of five sections which were intended to provide as complete a range of intelligence on the subject as possible. Like the individual focus group questions, the sections in the survey were arranged in a manner intended to encourage responses. The principle is to start with interesting questions that are not too difficult to answer, but which nonetheless start the respondent thinking along lines that will facilitate their answering later questions. The section order chosen was as follows:

- book reading
- book borrowing
- book ownership
- personal information
- focus group questions

In general, the sections on book borrowing and book ownership were intended to determine the degree of commitment the respondents had to books, using the criteria of time and money as indicators. Book reading, on the other hand, sought to obtain a variety of material related to human factors – when do people read, and where, and how much? The focus group questions were an even lengthier exploration of human factors, and personal information was for demographics on the sample.

The following summary sections deal with each of the major divisions of the survey, although the material derived from the focus group questions has been separated into its own section due to its somewhat greater length. For further details on the survey please see Appendix A: Detailed survey results.

Book reading

Respondents reported reading an average of 5.6 books a month, and consulting reference books roughly 62 times a month. In total, the average time reported for reading books was nearly 51 hours a month, which was slightly less than the average for reading from a monitor – 66.5 hours a month. Those who read to children spent an average of roughly 15 hours a month in that activity.

Of those who could remember their childhood reading patterns, roughly half reported that they had been read to more or less daily.

The majority (70%) indicated that they preferred reading the book to seeing a film adaptation or consulting the Internet. More than half the respondents preferred reading in a quiet room to reading with background music or a TV on, and of the remaining group the majority liked to read with background music playing.

In terms of the pleasure derived from reading, the vast majority (93%) rated books high on the scale (either 4 or 5 out of 5), and while there was a wider spread for pleasure derived in reading from a monitor, a large majority (83%) rated their pleasure lower than for books (as a 1, 2, or 3 out of 5).

¹⁰ At the time of this survey, an educational workstation copy of Filemaker Pro was roughly \$200 Cdn, while the server version cost \$1,600.

In general, respondents reported purchasing (two-thirds) more books than they borrowed (one-third), which was in contradiction to the data derived in the question dividing borrowing vs. buying, which suggested that borrowed books roughly doubled bought books (see below).

Time spent reading books vs. other printed material was also split two-thirds for books to one-third for other kinds of print matter. Fiction reading vs. nonfiction split roughly up the middle, while paperbacks vs. hardcovers were slightly weighted toward paperbacks (58% vs. 43%). Respondents also read primarily in English (94%) and reported school or work related reading as the bulk of their reading (70%).

In terms of reading locations, respondents reported that two-thirds of their book reading was done at home. Of the other third, locations were more widely scattered than simply at work or in libraries, with various respondents reporting that they read while travelling, while in various commercial locations (coffee shops, book stores), and even outside in parks, or while exercising.

Concerning body position and time of day, 70% of book reading was done sitting down. Very little reading was done standing (2%). Roughly half the time spent reading was in the evening, with another 10% after midnight.

Book borrowing

Respondents in general visited the university library far more frequently than the public library, and stayed longer on an average visit. Of the 39 respondents who reported using the public library more than once a month, two-thirds visited from one to three times a month and spent less than forty-five minutes per visit. Of the 47 respondents who reported using the university library more than once a month, forty percent visited more than eight times a month, and more than two-thirds spent longer than an hour. In the high range of visit frequency, no public library visitors went more than ten times a month, while a quarter of those using the university library went more than ten times a month.

Borrowing rates exceeded buying rates by roughly double for adults, while borrowing on behalf of children was an order of magnitude greater than buying for children. Respondents who indicated that they borrowed books at all borrowed on average slightly more than 8 books a month for themselves, while the very few people who indicated they borrowed books for children borrowed slightly more than 19 books for children per month.

Book ownership

Within this category there were two sub-categories, dealing respectively with buying habits and personal libraries. The answers suggested a fairly strong commitment to book buying and collecting, especially in the personal sphere.

Buying

The survey respondents bought an average of 46 books a year each for their own use – which equates to an average purchasing rate of almost 4 books per month. No distinction was made in the survey between new and used books, since the purpose was to determine commitment in general rather than details of purchasing patterns.¹¹ Those who bought books for children bought an average of 19 per year. The ones who gave books as gifts gave an average of 8 books a year, while the ones who received books as gifts received an average of 5 books a year.

¹¹ Other unasked questions dealing with book purchase might include membership in book clubs, tendencies to wait for sales, estimated average title costs, and patterns of seasonal adjustment.

Libraries

The majority of the respondents had larger home libraries than libraries at work, although in at least one case the distinction was blurred through the office being in the home. Roughly half the respondents had home libraries in the 201 to 1000 volume range, with the other half dividing more or less equally between a home library of less than 200 books, or greater than 1000 books. At work, on the other hand, more than half the respondents had fewer than 200 books. The percentage divisions of volumes in the home library were roughly paralleled by people's memories of the libraries in the homes where they grew up, although there were slightly more of the largest libraries (greater than 3000 volumes) in respondents' memories of childhood. Recall questions, it should be remembered, are usually interpreted with a high degree of caution, since memories, especially of childhood, are not generally considered reliable.

Personal information

The majority (roughly two-thirds) of the participants in this survey were women. Roughly two-thirds were also between the ages of 26 and 50. Income was spread across the range of choices available, but clustered at the extremes: 34% earned less than \$15,000 per year, while 26% earned more than \$45,000. The spread can probably be accounted for in that the cohort consisted in large part of graduate students and professors.

All but three respondents indicated they had completed at least a Bachelor's degree, while roughly half were currently pursuing either a Master's or Ph.D. Only one-third of the respondents had children, and roughly half of those with children had all their children grown up (greater than 17 years old). Only four respondents had very young children (aged one to four years old).

Implications for the design of the electronic book

In examining the summaries of data from the survey, it was possible to reach a number of tentative conclusions about the features that would make the electronic book congruent to the conventional bound book in ways that would be amenable to the members of this cohort of frequent book readers. These implications are organized by the four sections of the survey:

- book reading
- book borrowing
- book ownership
- personal information

Book reading

Since respondents not only read many books from cover to cover, but also consulted reference books on a fairly frequent basis (62 times a month on average), the electronic book should accommodate reference books as well as titles intended for complete reading.

Since more than half the respondents preferred reading in a quiet room, the electronic book should ideally be a silent device.

Respondents reported more pleasure in reading books than in reading from the monitor. This confirms the intuition that the display technology should resemble paper more than it resembles a monitor.

Since school or work-related reading formed the bulk of book reading for this cohort (70%), further intelligence should be gathered on the characteristics of school and work-related material (see the focus group section on course packs).

Since respondents read equal parts of fiction and nonfiction, the electronic book should accommodate both kinds of books.

Respondents tended either to read at home or else in a wide range of places. The electronic book should therefore be portable.

Since a large proportion of reading was done sitting down (70%), the electronic book should be designed for easy reading while sitting.

Book borrowing

Since book borrowing appears to figure prominently in the lives of people who read books frequently (although there was some discrepancy in the numbers indicating how prominently), the electronic book should allow for the principle of lending and borrowing books.

Since there is a high rate of borrowing indicated for children's books (among the sub-cohort who borrow books for children) it might be worthwhile investigating the details required for an electronic book for children which would allow for borrowing. However, there are too many factors that are specific to children's books to consider generalizing the Bi Sheng into that niche without considerable further study.

Book ownership

Since collecting books is quite a common activity within this cohort (based on average personal library size) it might be reasonable to try to find some mechanism for people to collect electronic books in such a way that the collection could be put on display.

Personal information

This study primarily represents (or would, if the number of respondents was sufficient to be representative) women with university degrees who read a lot of books. They are for the most part childless or have grown children.

Any design undertaken based on this collection of data should therefore be considered primarily as a design for this cohort.

Summary of survey-based focus group questions

The following questions from the survey are presented at this point because they are the same questions that were used in the focus groups. They were categorized under the five human factors: cognitive, affective, interpersonal, cultural, and physical. The order used for the categories was intended to help ease the respondent into the topic, so that earlier questions would help to prime people into thinking about areas that were subsequently addressed in more detail by later questions.

The summarization process involved collecting and grouping comments in much the same manner used in examining the focus group transcriptions. I took only tangential notice of frequency in the text answers, unlike in the more numeric parts of the survey dealing with commitment and demographics and reading habits.

The purpose for including the focus group questions on the Web survey was to extend the field as far as possible by obtaining opinions from more people. I was also curious to see how much could be expected from a Web survey in terms of a textual response, since the received wisdom is that questions requiring a text response should not be included at all in this medium (Nielsen, "The Questions"). I found on the contrary that in this cohort, at least, people were quite willing to write at length.

In surveying the results of the survey, it occasionally happened that I would construe alternative or additional answers of my own which were not part of my original intuitions on the various topics. I have recorded these thoughts below, indicating that they are my ideas rather than deriving directly from the survey respondents.

Cognitive

There were two cognitive questions: “What leads you to read a book?” and “What do the books you like have in common?” These are to some extent the same question, and there was naturally some overlap in the answers. But although the two questions approach the same domain, they approach it from different sides, in the first case foregrounding the choice of an individual title and in the second looking for common factors across titles already chosen.

What leads you to read a book?

The answers here included references to several aspects of books themselves; to the reading process; interpersonal communications; cultural mechanisms for recommending or locating reading material; as well as a few miscellaneous factors which I have collected at the end.

Intrinsic to the book

These factors included the title of the book, any blurbs, and the cover, as well as the overall physical attractiveness of the volume. Familiarity with the author or the series was also mentioned, as were the presence of illustrations or a thorough index. One respondent was in the habit of reading the first page as part of the decision process.

Intrinsic to reading

In choosing books to read the respondents were looking for a variety of experiences, including relaxation, escape, and pleasure. Some people emphasized their interest in genre or subject matter or the story. One respondent suggested that the search for a sense of belonging was part of the mechanism in choosing books, while another saw books as part of problem solving. One respondent felt that it was significant that in reading a book, the experience can be suspended and resumed.

Recommendations from other people

People had books recommended by friends and colleagues, but also by book dealers. And it occurred to me later that I have also had books recommended to me by librarians, especially in high school, as well as by professors at university.

Cultural apparatus

There are a number of cultural mechanisms for recommending or privileging particular books, and the respondents mentioned several of these mechanisms, including book reviews, recommendations on TV, references in other texts, subject searches in library catalogs, and requirement for work or school.

Miscellaneous thoughts

Several respondents mentioned factors that were not logically related to the previous categories. One mentioned the attractiveness of some book store interiors; another that they tended to read more when they were sick. Another respondent pointed out that guilt was at issue in choosing to read some books: “there are some books I should read.” Finally, the point was made that some people just like books, no matter what kind: “It’s a book. I’m drawn to all books.”

What do the books you like have in common?

To a certain degree the answers to this question could be logically divided into discussions of fiction and nonfiction, although some comments did apply to both kinds of books.

Fiction

In discussing fiction, people identified a variety of aspects of stories, including action, suspense, and the plot. They also highlighted the importance of having a compelling story, and some of the respondents emphasized genre – mystery, fantasy. Several people wrote of the use of fiction as a form of escape or relaxation.

On a scale slightly expanded from the concerns of the individual title, one respondent suggested that continuity was important in the form of novel series with on-going characters, and several mentioned having favourite authors. Others tended to read books that had been recommended to them from either public sources like Oprah Winfrey or private sources like family and friends, and one person said that the main thing their fiction choices had in common was that all the books had been received as gifts. Some respondents were able to be quite specific, with one suggesting that they looked for books with female characters, while another chose books that showed good defeating evil.

Nonfiction

Nonfiction titles are naturally associated with learning, and many respondents mentioned the value of learning something new on a topic of ongoing interest or else learning something new on an entirely new topic. Some people mentioned a preference for certain non-fiction genres such as religion and self-help, while others pointed out that much of their non-fiction reading is required by work or school. A couple of people talked about preferring material that was up to date. One respondent mentioned the importance of the information being easy to navigate, while another brought up the fact that the books they chose to read tended to have a well-supported thesis.

Both fiction and nonfiction

Many of the responses could equally well apply to fiction or non-fiction. For example, people identified as common factors in the books they chose such elements as amusement, insight, challenge, inspiration, and new perspectives. Others privileged competent writing, cohesiveness, and the importance of being able to get caught up in a book. Special interests were mentioned in feminism and interculturalism. Some people identified physical elements, including elegant appearance, and in one case large print. Finally, more than one respondent was unable to identify common features in the books they chose: “They appeal to me on many levels, and my choices are certainly eclectic so this is difficult to answer.”

Affect

There were two affect questions: “What is the difference between the experience of reading a book and the experience of dealing with other sources of information and entertainment, such as movies, television, or the Internet?” and “What do you like about books?” Strictly speaking, the former question is not necessarily affective, since it could just as easily be answered from a cognitive perspective, and in fact many answers had more to do with perception than with emotion.

What is the difference between the experience of reading a book and the experience of dealing with other sources of information and entertainment, such as movies, television, or the Internet?

This was one of the questions that received the longest responses. There were 1,700 words written in addressing this question, out of the survey’s total of 8,000 words for 10 questions. The answers have been divided by media, and the comments on reading books have been grouped by comments specific to the process of reading and comments related to books as objects.

Reading

Reading was characterized as an activity that allows the reader more control than is common in other media. Reading was described as relaxing, private, and self-directed. The reader can set the pace. Reading calls for self-reflection, mental engagement, and imagination; it also calls more directly, in the opinion of one respondent, on emotional or moral involvement. The gratification is less immediate than in other media; reading also lends itself naturally to re-reading part or all of the book. Reading was also described as primarily verbal, although one respondent also explained that mental immersion was part of the experience: "Somehow reading a book seems more tangible; somehow you can really feel yourself in the book; it seems more real, more permanent."

More than one respondent felt that part of the virtue of reading lay in that it was a demanding activity: books required a time commitment; they took concentration; the experience was more in-depth. "Books," in the words of one respondent "kick start my critical faculties." They also allowed more opportunity for exploring characters: "I like books better because you can get behind the characters more, into their thoughts, feelings and motivations."

Books

In terms of books as objects, respondents felt strongly that books were personal in some way. Books could be stamped through use; "it's easier to think of a book as a 'friend', or have a 'history' with it." Books were commended as being portable, quiet, and providing an experience that was repeatable: "Books are like old friends that you can come back to at any time." Some people mentioned liking the way books feel. Others emphasized the importance of language, the charm of words, and the importance of the text being fixed rather than fluid.

In direct comparison to other media, some respondents felt that books are a more reliable source of information; others that books provide more options. In direct physical terms it was remarked that books can be written on, and that their existence as physical objects makes subsequent reference to particular sections easier. Responses were in general quite enthusiastic about the virtues of books:

"Books are beautiful in their structure, educational, enjoyable, informative, insightful, and energizing."

Movies/TV

Movies and television were characterized by the focus group participants as, from a negative perspective, at once more passive and more invasive than books, and from a positive perspective, as media that allowed the viewers to turn their own brains off and enjoy someone else's imagination for a while. They were seen by some as positioned for a mass market of the lowest common denominator, and by others as a vehicle for entertainment that lent itself to being the basis of shared experience.

Internet

Respondents tended to see the Internet as a utilitarian medium, which in some instance was capable of producing the most extended information on a given topic. Shortcomings included its lack of portability and the problems of reading from a monitor: "computer screens just give me a headache after a while." One respondent suggested that the Internet could become a compulsion.

Miscellaneous responses

One respondent answered simply that there was no difference between the media.

What do you like about books?

The answers to this question had a powerful emotional charge, perhaps because it was the central affective question for the entire survey. Several of the respondents used words like “love” and “treasure,” which to some extent reflects the self-selection that would naturally be part of responding to a survey, but is indicative nonetheless of the bounds of the discourse that seem appropriate to frequent readers in discussing their books:

“I can’t think of anything I do not like – make that love – about books. I do love owning them, and so even though I administer an academic library, I don’t like to borrow them. They are that important to me.”

Many of the people who answered this question felt a strong emotional attachment to books, and were able to articulate a wide variety of components that were constituents of the attachment. The gist of their comments can be summarized, however, in three words written by one respondent: “the whole experience.” A more detailed list was created by another writer, as follows:

“The way you can take them anywhere. You don’t need electricity. You don’t need any hardware or software. They never crash. They smell good. You can flip back and forth with ease. You can read in a confined space. The way they’re always there for you. The way they’ve saved my life more than once. The way they line up on a shelf so I can look at them whenever I want. The way they calm children. The way they enthrall children. The pictures of great artists are available to me even if I live in a remote location. And lots more. Books are beautiful.”

Other respondents added to the list of particulars, including the fact that books are static and quiet, that they can stimulate thinking, and in some cases a sense of nostalgia, that they serve the dual purposes of escapism and education.

Several people mentioned physical factors such as the smell, feel, and shape, and more than one person pointed out that there is something affecting in the fact that the reader holds the book while reading it. One respondent wrote of the usefulness of being able to annotate the pages of a book, while another saw the act of turning pages as a pleasure: “I like to feel them and turn the pages.”

In addition, people pointed out that books are portable, comparatively cheap, and relatively permanent. Some mentioned liking pictures, and others privileged scholarly apparatus. One respondent spoke of the universality of books, another of their variety, and still another mentioned that they were valuable for providing different perspectives.

Still others spoke to the reading process, suggesting that there was a pleasure in being able to identify various literary forms, to read a well-structured argument, or to see innovative uses of language. One respondent characterized reading as a meditative experience, while another mentioned the value of being able to control the pace so easily.

Books vs. other media

Comparisons to other media arose in the course of this question, even though it had been the specific topic of a previous question. Respondents pointed out that books do not contain commercials, nor do they crash. They can be taken where electronic devices are prohibited and can be read in the bathtub or in bed. They also feature an element of privacy.

Miscellaneous thoughts

Several respondents replied in somewhat idiosyncratic terms. One mentioned that there is a cultural agenda for educated people to know as much of the canon as possible; another felt that involvement with books was a mark of distinction: “You meet a nicer class of people.” Still another liked the sheer accumulation of volumes: “the way they fill up the walls and stack up next to the bed.” One respondent summed up the general impression given by the majority of respondents: “What is there not to like?”

Cultural

The two cultural questions were: “When do you want reading material in a form other than a book?” and “Do you consider books to be a part of your lifestyle? If so, in what ways?”

When do you want reading material in a form other than a book?

The short answer to this question is that many respondents read text in whatever form it is available. There were a wide range of particular cases, however, which respondents were able to identify. For example, one respondent generated a list that was quite specific as to time, place, and media:

On a Sunday morning I want my bagels, chai, and at least one Sunday paper - usually two, the local rag and an international or larger city paper. On a Saturday morning I want to read comic books in bed until noon. On an exercise bike I want frothy pulp magazines that I don't have to concentrate on. I also subscribe to a few electronic newsletters, and read them as long as the sections are brief. I always read the CD covers and liner notes when I listen to music. Conde Nast Traveler magazine has a permanent home next to the toilet.

Many of the other responses were similarly precise, but could be categorized to some degree under the following headings: content, genre, process, and location or other special cases.

Content

Respondents pointed out that books were not necessarily appropriate vehicles for ephemeral material like news, reviews, and some forms of commentary. They also saw the value of electronic media for 3D, interactive, and large reference works. One respondent pointed out that some texts are only available on-line, while others stated that they looked on-line for instructional materials and entertainment.

Genre

Books are similarly not associated with certain other text genres. Respondents identified newspapers, comic books, magazines, E-mails, and CD liner notes as examples. One respondent also mentioned using books on audio tape while driving.

Process

Some processes privilege other media. These include searching, scanning, quick answer, fast access, and retrieval of the most up-to-date references. One respondent also pointed out that research reports are not produced in book form.

Location and special cases

Special cases where respondents accessed material in forms other than a book included: while riding on the bus; while away from home; in the bath; when mentally fatigued; when reading time is restricted.

Do you consider books to be a part of your lifestyle? If so, in what ways?

Although not all respondents replied in the affirmative, the vast majority of them did. The richness of detail provided in answer to some of the other questions was reduced in this case because on account of an oversight on the part of the designer, for the first half of the respondents the second question was not present. As a result, the question could be looked at as a simple case of responding “yes” or “no,” without providing more detail. Accidentally including a “yes/no” question is one of the pitfalls to check for in testing focus group questions, and is of course even more important when those questions are for use in a survey, where the moderator is not available to correct the shortcoming.

The primary insight that the answers to this question reinforced was that books are often an expression of personality in a way that might never be superseded by an alternative. It seems unlikely, based on this limited sample, that we will see books replaced in this generation. People collect all manner of objects, and as long as bound books are available it is reasonable to assume that there will be people who want to collect them. And in some cases the responses indicated a high degree of emotional attachment:

“Yes. I have been collecting books for over 15 years now, it’s one of my few pleasures in life and has introduced me to many interesting and friendly people whom I would otherwise not have had the pleasure of knowing. Scouring second-hand book shops is an integral part of my leisure activities.”

Respondents indicated that books were part of their lives at work, school, and leisure. They travelled with books, talked about books, loaned books to their friends, and read before falling asleep at night. Some respondents indicated that reading was one of their primary and preferred activities. One respondent suggested that books represented a kind of emotional bond similar to close friendship.

Interpersonal

There was only one interpersonal question: “Are books a part of your social life: are you a member of book discussion or reading groups, or do you lend or borrow books, or recommend books or get books recommended to you?” This was an area that could have potentially been explored more thoroughly, but I was uncertain as to the function of the interpersonal in providing information that would be relevant to the specification of design criteria.

Are books a part of your social life: are you a member of book discussion or reading groups, or do you lend or borrow books, or recommend books or get books recommended to you?

Like the previous question, this one revealed some serious shortcomings in that it could be answered simply yes or no, and for people who provided more detailed responses, many of them were led by the list of suggestions into a series of yes/no answers. The total word count deriving from this question was only 740 words, out of the survey’s total of 8,000 words for 10 questions.

This kind of question might have been better placed in the body of the survey, where a tally could have been taken rather than written responses collected. However, in retrospect I think it might have been just as reasonable to leave this question unaddressed, since the answers, no matter what they were, could not really be expected to facilitate the design of a better electronic book. It was of marginal interest that there were no respondents who said they participated in reading groups, although the majority discussed books socially and exchanged both recommendations and actual books with others.

Fortunately, not all the answers were strictly on topic, and I think some useful comments were given in spite of the problems with the question itself. In addition to the collection of positive and negative responses, some respondents added that books were part of their romantic life; books also served as the basis for conversations with children; and in some cases books were a significant part of their professional activity.

One respondent mentioned that going to bookstores was a normal part of visiting a new place, another wrote of being a member of listserv book clubs, and a third pointed out that giving books is part of social life: “Giving a book as a gift is a sign of a person’s character.”

Physical

There were two physical questions, one about existing electronic books and the other about potential electronic books. At the time of writing the questions I felt that the

physical attributes of the conventional bound book would have been well covered by answers to the previous questions, which in fact turned out to be the case.

If you currently own or use an electronic book like the Rocket eBook, SoftBook, or EveryBook, what do you think of them?

Perhaps unfortunately, none of the survey respondents had any experience with these electronic reading devices, and so had little to say in response to this question, beyond in a few cases suggesting that they might be useful as reference tools.

Physically, what would it take for you to choose an electronic book over a printed book?

In response to this question many of the participants responded by suggesting, perhaps somewhat tongue-in-cheek, that coercion would have to be used in some form in order for them to accept an electronic book. The most telling comment to my mind was the one that said: "When it is sensually indistinguishable from a printed book." More than one respondent just flatly refused to consider the question at all.

Of those who provided more detailed answers, one group suggested that prestige would be a factor – if the reader were stylish or "super cute," or if it was something that could be used to show off to others. More basically pragmatic considerations included a reasonable price, easier access, better availability, and the ability to borrow and not just buy books.

Improvements over existing technology included being able to read it without batteries; if eye strain were removed as a factor; waterproofing; and if there were no windows with menus. One respondent also mentioned the importance of being able to keep a copy on file.

Positive physical qualities were also listed, including high resolution, the ability to write on it, compactness and lightness superior to that of a book, turnable or bookmarkable pages, and interactivity. People also mentioned the importance of a warm page tone, some organic element – a wooden box, a cloth cover, or an earthy smell.

Finally, do you have any other comments?

Somewhat surprisingly, there were a number of paragraph-length responses to this final wrap-up question. Respondents took the opportunity to make final remarks that they had either neglected to make earlier in the survey, or which they felt had not been elicited elsewhere. Several respondents were kind enough to express felicitous wishes on the project, and some provided contact information and requested copies of the conclusions.

Specific comments included the opinion that electronic books might be useful, but would be difficult to love; that there is an element of ritualistic comfort in reading a conventional bound book; that monitors tire the eyes; that an acceptable electronic book might include features like a built-in dictionary and some mechanism for making marks on the pages; and that computers are better at providing searchable information, while cover-to-cover reading is for books.

"I would rather have a cheap book on paper than an expensive electronic thing. There's something "right" about traditional books, I can't explain it. Why mess with a good thing? Unless an electronic book mimics and improves what I can get out of a real book, I don't think I'd want one."

Implications for the design of the electronic book

In developing the implications from the summaries of the survey text answers, I have reproduced the categories used to organize the summary material. In cases where a particular category resulted in no design suggestions, the category title has been retained and the lack of implications indicated. In cases where the same implication

could be drawn from more than one section, I have let the duplication stand at this point, but have removed it from the higher level primary research summary.

What leads you to read a book?

Intrinsic to the book

Respondents mentioned several aspects of the cover: author, title, cover design, blurbs, and reviews. The electronic book should therefore display this same material on the cover.

Respondents also mentioned indexing, which suggests that the electronic book should be searchable.

Intrinsic to reading

The Bi Sheng should include a mechanism whereby reading can be easily suspended and resumed.

Since genre is one of the factors used in choosing a book, some mechanism should be present for identifying the genre of the currently loaded book.

Recommendations from other people

I could draw no relevant implications from this discussion.

Cultural apparatus

In marketing the Bi Sheng, it would be logical to adopt as many of the parts of book culture as possible, including book reviews, recommendations on TV, references in other texts, subject searches in library catalogs, and requirement for work or school.

Miscellaneous thoughts

The comment that one respondent made concerning the increased amount of reading done while sick suggests that there may be a role for the electronic book in hospitals. This would require further investigation and development.

What do the books you like have in common?

Fiction

In reference to favourite authors, it occurs to me that the default cover design might take two different forms – one privileging the title and the other the author.

In gaining acceptance of the Bi Sheng, an encomium from Oprah Winfrey would be valuable, in that more than one participant mentioned taking her advice in considering new titles.

Nonfiction

Since a primary selection criteria for nonfiction is its mandatory purchase for work or school, it would be valuable to infiltrate the classroom as a potential market for the electronic book.

Both fiction and nonfiction

The Bi Sheng should support large print display.

Affect

What is the difference between the experience of reading a book and the experience of dealing with other sources of information and entertainment, such as movies, television, or the Internet?

Reading

I could draw no relevant implications from this discussion.

Books

The Bi Sheng should be capable of being “stamped through use.”

The Bi Sheng should be portable.

The Bi Sheng should be quiet.

The Bi Sheng should be capable of being written on.

The Bi Sheng should be designed in such a way as to make subsequent reference to particular sections easy.

Movies/TV

I could draw no relevant implications from this discussion.

Internet

The Bi Sheng should be interactive and provide up-to-the-minute information.

The Bi Sheng should be portable.

The Bi Sheng should not require reading from a monitor.

Miscellaneous responses

I could draw no relevant implications from this discussion.

What do you like about books?

The Bi Sheng should physically reproduce the conventional bound book to as great a degree as possible. Specifically, it should not require electricity or software. It should not crash. It should smell good. It should allow the reader to flip back and forth. It should be collectable. It should be attractive to children and have a calming effect on them.

The Bi Sheng should be static and quiet.

The Bi Sheng should be designed in such a way that the reader holds it while reading.

The Bi Sheng should have pages that turn.

The Bi Sheng should be amenable to annotation.

The Bi Sheng should be comparatively cheap.

The Bi Sheng should allow incorporation of pictures.

The Bi Sheng should allow incorporation of scholarly apparatus.

There should be a variety of sizes and shapes of Bi Shengs.

Books vs. other media

The Bi Sheng should not have noises or lights that would make it prohibited in places that prohibit other electronic devices.

The Bi Sheng should not display commercials.

The Bi Sheng should not be able to crash.

The Bi Sheng should be amenable to reading in the bed or the bathtub.

The Bi Sheng should feature an element of privacy

Miscellaneous thoughts

The Bi Sheng should be collectable in a physical way.

Cultural

When do you want reading material in a form other than a book?

Content

Respondents saw the value of electronic media for 3D, interactive, and large reference works. Since the first two classes of material represent areas in which the Bi Sheng would be competing with the computer rather than with the conventional bound book, they would require further study before being adopted as features.

Genre

I could draw no relevant implications from this discussion.

Process

Several features were identified where an electronic book might surpass a conventional bound book. These include searching, scanning, quick answer, fast access, and retrieval of the most up-to-date references.

Location and special cases

I could draw no relevant implications from this discussion.

Do you consider books to be a part of your lifestyle? If so, in what ways?

The Bi Sheng should be collectable.

The Bi Sheng should be amenable to lending.

The Bi Sheng should be susceptible to resale through second-hand bookstores.

Interpersonal

Are books a part of your social life: are you a member of book discussion or reading groups, or do you lend or borrow books, or recommend books or get books recommended to you?

The Bi Sheng should be amenable to being given as a gift.

Physical

If you currently own or use an electronic book like the Rocket eBook, SoftBook, or EveryBook, what do you think of them?

I could draw no relevant implications from this discussion.

Physically, what would it take for you to choose an electronic book over a printed book?

The Bi Sheng should be as much like a conventional bound book as possible.

The Bi Sheng should be physically attractive – something that could be displayed with pride.

The Bi Sheng should come at a reasonable price.

The Bi Sheng should be amenable to borrowing.

The Bi Sheng should be easy to access.

The Bi Sheng should make material available that is not readily available in conventional bound book form – out of print or digital documents, for example.

The Bi Sheng should not need batteries in order to read it.

Reading the Bi Sheng should not cause eye strain.

The Bi Sheng should be waterproof.

The Bi Sheng should not have windows with menus.

Files from the Bi Sheng should be retrievable onto the computer.

The Bi Sheng should have high resolution.

The Bi Sheng should be annotatable.

The Bi Sheng should be lighter and more compact than a book.

The pages should be turnable.

The Bi Sheng should be bookmarkable.

The Bi Sheng should be interactive.

The page should have a warm tone.

The Bi Sheng should incorporate some organic element – a wooden box, a cloth cover, or an earthy smell.

Finally, do you have any other comments?

The Bi Sheng should as far as possible mimic and improve on the features of a conventional bound book.

Reading the Bi Sheng should not cause eye strain.

The Bi Sheng should be annotatable.

The Bi Sheng should include a dictionary.

The Bi Sheng should be searchable.

Primary research

In addition to consulting my own intuition, a number of informal conversations with various people, and the literature on electronic books, I conducted a survey and two focus groups. The survey participants were 58 people of any age and gender who for the most part had at least one university degree, and many of whom were actively engaged either as graduate students or professors. The focus group participants were 7 women graduate students from either the Department of English or the Department of Art and Design at the University of Alberta. This section summarizes the previous, more-detailed sections on the survey and focus groups. More details are available in Appendixes A and B. A table of design objectives and their implications is also given at the beginning of the section on the prototype.

A fundamental consideration in reviewing the findings taken from this primary research is that it is not in any way to be thought adequate as a representation even of the relatively narrow cohort I used, while focus groups are never statistically representative but serve rather as a mechanism for exploring the diversity in a field.

One danger with this sort of high level summary is that the listing of results can become banal when it is detached from the significance of the context of the individual remarks. There is undoubtedly more to be gained from the details than from the general picture, which could probably have been developed without the investment of resources necessary for a survey and focus group. However, the high level summary does serve the function of indicating a framework which is subsequently used to structure the detailed discussion.

Summary of results of primary research

The following sections represent an amalgamation of the results of the survey and focus groups. The material has been loosely organized around the focus group questions, using the following topics:

- Participant profile
- What leads you to read a book?
- What do the books you like have in common?
- How would you compare books with other media?
- What do you like about books?
- When do you want reading material in a form other than a book?
- Are books a part of your lifestyle?
- Are books a part of your social life?
- What is your opinion of the current electronic books?
- Physically, what would it take for you to choose an electronic book over a printed book?
- Other comments

For further details, please see the individual summaries of the focus group sessions and Web survey.

Participant profile

People contributing to this study were frequent book readers, for the most part women between the ages of 26 and 50 with university degrees. Half of them were currently graduate students.

In general they preferred books to other media, although they tended to spend slightly more time reading from the monitor than they did reading from books. They also tended to read in quiet places, often sitting down at home in the evening, although the majority of their reading was related to work or school. They used the university

library far more frequently than they used the public library, and stayed longer on their visits. They bought nearly four books a month on average for themselves, and borrowed twice as many again.

They also had fairly large personal libraries, with three-quarters of them owning more than 200 books at home; their work or office libraries were smaller – more than half had less than 200 books at the office.

What leads you to read a book?

Basically, the answers can be listed as follow: professional necessity; the content; samples; escapism and relaxation; the cover; the author; the series; recommendations, reviews, and awards; the search for a sense of belonging; good apparatus. Several participants gave a sense of liking all books. One mentioned that some books are collectable, while others are disposable, although there was no consensus about how this distinction was made.

What do the books you like have in common?

Many of the answers to this question dealt with content – books were chosen because they were of a genre or on a topic that interested the reader – although recommendations were also mentioned as a factor. Other comments included the importance of genre, and in the case of nonfiction the ease of navigation. Physical elements included elegant appearance, and in one case large print.

How would you compare books with other media?

Participants in general saw reading as more active, engaging the reader's imagination and intellect to a greater degree than the other media tend to do. The reader is in control of what is essentially a solitary activity, both setting the pace and having time available for reflection and analysis. Reading was also characterized as primarily verbal as opposed to visual. In physical terms the participants liked handling books, collecting them, re-reading them, in some instances leaving a mark on them.

In contrast, television was portrayed as mindless, although it could be a source of conversation. The Internet was characterized as either utilitarian or escapist entertainment; participants were willing to read short passages off the monitor, but printed longer documents both for reading and retention. Movies and even documentary films provided entertainment but were generally regarded as more limited in scope than books. Newspapers were described as ephemera and inaccurate to boot.

Participants also mentioned some of the physical characteristics of the different experiences, including the fact that books were more portable and do not run commercials; nor do they crash. They can be taken where electronic devices are prohibited and can be read in the bathtub or in bed.

What do you like about books?

Respondents really liked books. They enjoyed reading books, lending and borrowing books, talking about books, buying books, and having books around them. One respondent suggested that books had saved her life.

Physically, they liked the fact that books are static and quiet. They liked the smell, feel, and shape, and enjoyed holding books while reading. Some respondents enjoyed turning pages, the feel of paper, while others enjoyed marking their books.

In addition, people pointed out that books are portable, comparatively cheap, and relatively permanent. Some mentioned liking pictures, and others privileged scholarly apparatus. One respondent spoke of liking the variety, while many enjoyed collecting books.

People were variously enthusiastic about new books and old books, hard cover books and trade paper books and disposable paperback books. Details included the smell, the crispness of a new book, the comfortableness of a book that one has read repeatedly.

When do you want reading material in a form other than a book?

Respondents were readers first and book readers second. That is to say, they read text in whatever form seemed most appropriate. They identified various reasons for reading newspapers, Web newspapers, comic books, magazines, E-mails, and CD liner notes, as examples. One respondent listened to books on audio tape while driving. Photocopies were also popular among focus group participants, who were used to reading from course packs as opposed to books. Photocopies could also be marked up without the danger of guilt, unlike books.

Electronic media were also preferred for some functions, such as searching, scanning, quick answer, fast access, and retrieval of the most up-to-date references. Special cases where respondents accessed material in forms other than a book included: while riding on the bus; while away from home; in the bath; when mentally fatigued; when reading time is restricted.

Are books part of your lifestyle?

Most respondents replied in the affirmative. Shopping for books was a common social activity. Books served as topics for discussion with friends, colleagues, and family. Respondents travelled with books, talked about books, loaned books to their friends, and read before falling asleep at night. Some respondents indicated that reading was one of their favourite activities. One respondent suggested that books represented a kind of emotional bond similar to close friendship.

Book collections were seen as status objects and an expression of personality. They signified learning and an investment in the culture of reading. Some respondents spoke of the importance of provenance, especially where the previous owners were family members. Others saw particular books as important artifacts through personal associations with the object.

Are books a part of your social life?

Participants in general felt that books did play a role in their social lives, although responses were mixed. For some respondents books were part of their romantic life. For others books played a role in their relationships with children. In some cases books were a significant part of professional life, which often has a social dimension. Respondents generally shared books or recommendations with the people they knew. Discussions of books served as a basis for personal expression, as well as for evaluation of acquaintances.

One respondent mentioned that going to bookstores was a normal part of visiting a new place, another wrote of being a member of listserv book clubs, and a third pointed out that giving books is part of social life.

What is your opinion of the current electronic books?

Perhaps unfortunately, none of the survey respondents had any experience with these electronic reading devices, and so had little to say in response to this question, beyond in a few cases suggesting that they might be useful as reference tools.

The focus group participants had very limited experience with electronic reading devices. One had seen the Rocket eBook on TV, and considered it unacceptably like a computer. Another participant mentioned the cost, which rendered the current electronic books too precious to be handled comfortably. The owners, she felt, would constantly be worried about losing or damaging the reader.

Physically, what would it take for you to choose an electronic book over a printed book?

Respondents expressed doubt that they would ever prefer an electronic book, although they were willing to provide a wide range of suggestions. In sum, they wanted the electronic book to be physically as close to the conventional bound book as possible, without relinquishing the advantages of electronic text.

Detailed answers included the idea that both novelty and prestige would be factors, as would be a reasonable price, easier access, better availability, and the ability to borrow and not just buy books. Some respondents emphasized the importance of being able to try the device out without the necessity for committing to the expense of purchasing it.

Improvements over existing technology included being able to read it without batteries; if eye strain were removed as a factor; waterproofing; and if there were no windows with menus. They also felt that motion and sound would be advantages, although not essential. One respondent mentioned the importance of being able to keep a copy on file. Another commented that proprietary text formats would be a disadvantage both in terms of cost and selection.

Positive physical qualities were also listed, including high resolution, the ability to write on it, compactness and lightness superior to that of a book, turnable or bookmarkable pages, and interactivity. People also mentioned the importance of a warm page tone, some organic element – a wooden box, a cloth cover, or an earthy smell.

In general, respondents felt the electronic book would only be able to supplement rather than replace the personal library. They felt that the collection of many books in one cover was not necessarily an advantage, unless they were able to create the collection themselves and the result would be both searchable and annotatable.

For classroom use it was felt there might be some advantage in providing a connection to an overhead display. Respondents saw little value in an oversized (folio or broadsheet) display. Concerning the possibility of distributing titles on CD so as to provide an artifact, opinions were mixed but generally not sanguine.

More than one participant mentioned that a device that operated silently would be better than one that made noise. Several participants mentioned the importance of the way books smell, including both new books and old books.¹² It was generally felt that the electronic book should not resemble a piece of machinery. It should also not be so expensive as to require too many precautions in its transportation and use.

Other comments

Specific comments included the opinion that electronic books might be useful, but would be difficult to love; that there is an element of ritualistic comfort in reading a conventional bound book; and that computers are better at providing searchable information, while cover-to-cover reading is for books.

Participants in the first focus group felt that there was a viable niche for an electronic reader that would replace course packs, while members of the second focus group suggested a potential market in government departments who continually revise internal manuals.

Implications for the design of the electronic book

The set of insights derived from the focus groups and survey have been summarized under the following themes:

¹² The Rocket eBook comes with an optional leather case, the SoftBook includes a leather cover flap, and the EveryBook was bound in leather specifically to address this point.

- Desirable features
- Optional features
- Undesirable features
- Potential applications
- Topics requiring further study

Desirable features

The desirable features are discussed under several categories, as follow:

- Features derived from the conventional bound book
- Features derived from the computer
- Features improving on both the bound book and the computer
- Marketing and cultural features

Features derived from the conventional bound book

Since the Bi Sheng is intended to appeal to frequent readers of conventional bound books, the features that derive from the conventional bound book form the largest class of desirable features.

Like a book

In general, the primary research supports the conclusion derived originally from the designer's intuition that the Bi Sheng should as far as possible mimic and improve on the features of a conventional bound book.

In particular, the Bi Sheng should be inexpensive¹³ and portable. Each title when loaded should display an individual cover with author, title, cover design, indication of genre, blurbs, reviews, and information as to whether the book is part of a series. The Bi Sheng should be able to provide the reader with the ability to annotate individual pages on the one hand, and to mark with bookmarks or Post-it type notes on the other. The Bi Sheng should include a mechanism whereby reading can be easily suspended and resumed. The reader should be able to hold the Bi Sheng comfortably while reading it, and read it either sitting or lying down.

In detail, the research suggests that the Bi Sheng should be designed in such a way as to make subsequent reference to particular sections easy. It should have turnable pages. It should be light enough to be comfortably held in one hand. It should incorporate some organic element – a wooden box, a cloth cover, or an earthy smell. It should accommodate any material currently available in conventional bound form – fiction, nonfiction, scholarly apparatus, and illustrations. It should support large print. Ideally, there should be a variety of sizes and shapes of Bi Shengs.

Not like a computer

In addition to the conclusion that the Bi Sheng should be as much like a conventional bound book as possible is the corollary that it should also have as few of the negative qualities of a computer as possible.

In particular, the Bi Sheng should not use a monitor for display. Ideally it should not cause eye strain. It should not have noises or lights that would make it prohibited in places that prohibit other electronic devices. The user should not need batteries in order to read it. It should not crash or display advertising.

¹³ Expense is currently considered less important in the marketing world than indicators of willingness to pay, perhaps because definitions of what constitutes expensive or inexpensive are so flexible.

Cultural considerations

If possible, the Bi Sheng should also be physically attractive – something that could be displayed with pride. It should allow for the principle of lending, borrowing, and test driving books, as well as giving books as relatively inexpensive gifts.

If possible, the Bi Sheng should be amenable to collection and public display in the same manner as the conventional bound book. It should be capable of being “stamped through use.”

Features derived from the computer

The Bi Sheng should be interactive and searchable. It should allow for scanning, quick answer, fast access, and retrieval of the most up-to-date references. The Bi Sheng should include a dictionary.

Features improving on both the bound book and the computer

The Bi Sheng should be lighter and more compact than a book. It should have high resolution and be waterproof. Files should be retrievable onto the computer.

The Bi Sheng should make material available that is not readily available in conventional bound book form – out of print or digital documents, for example.

Marketing and cultural features

Since part of the culture of frequent book readers is shopping at both new and second-hand bookstores, the Bi Sheng should be available through both venues.

In marketing the Bi Sheng, it would be logical to adopt as many of the parts of book culture as possible, including book reviews, recommendations on TV, references in other texts, and subject searches in library catalogs. Since a primary selection criteria for nonfiction is its mandatory purchase for work or school, it would be valuable to infiltrate the classroom as a potential market for the electronic book.

In gaining acceptance of the Bi Sheng, an encomium from Oprah Winfrey would be valuable, in that more than one participant mentioned taking her advice in considering new titles.

Optional features

Participants clearly preferred text over film, which suggests that the provision of motion and sound in the electronic book might be an optional feature for this cohort rather than an essential feature.

The Bi Sheng might contain tagging and word frequency analysis programs, but such provision is not essential.

The ability to connect the electronic book to an overhead display was also seen as potentially valuable but not essential.

Undesirable features

The Bi Sheng should be as little like a machine as possible. In particular, it should operate silently and it should feel and smell organic rather than electronic.

The Bi Sheng display should be as much like a printed page as possible, and as little like a monitor as possible. That is, reading the Bi Sheng should not cause eye strain, and the page should have a warm tone.

The focus groups saw no need for folio-sized electronic books.

The Bi Sheng need not provide news display, since current methods (both print and net) were considered sufficient in light of the usually short length of the texts involved.

Since the perceived shortcomings of the Web included the necessity for reading off a monitor, the slowness of response, and scrolling, the design of the electronic book should try to avoid or minimize these problems.

Distribution on CD would not provide, in the opinion of the focus group participants, any advantage in the way of making the electronic book a collectable item. If anything, CD distribution of titles might be detrimental in that the reader would involve internal movement and sound in accessing the CD.

Current electronic books were considered too expensive, with readers judging the expense based on the cost of the physical device rather than on the cost of individual titles.

Current electronic books were also seen as too condescending or patronizing in their efforts to simulate qualities of conventional books without actually duplicating the readers' experience.

The Bi Sheng should allow the user to collect complete works in one cover, but should not come with preloaded collections.

The Bi Sheng should not have windows with menus.

Potential applications

Any design undertaken based on this collection of data should be considered primarily as a design for women with university degrees who read a lot of books

Since there are in some people's minds the two classes of disposable books and collectable books, the Bi Sheng might be developed in two formats – one intended for permanent storage as part of a collection and the other for ease of overwriting and reuse.

If the Bi Sheng is to be perceived as a valuable object in its own right, it should have a hard cover. If it is to be positioned as more disposable, it should have a soft cover.

The focus group participants indicated that supersession of bound books would not be a realizable goal for the electronic book.

The Bi Sheng should allow for collection, display, searching, and annotation of short documents tailored for that purpose by the user. This functionality would allow it to compete with course packs.

If possible, individual electronic books should not exceed their conventional bound equivalents in price.

The focus groups identified two key niche markets, in replacing course packs and in providing a vehicle for government manuals.

Topics requiring further study

Since there is a high rate of borrowing indicated for children's books (among the sub-cohort who borrow books for children) it might be worthwhile investigating the details required for an electronic book for children which would allow for borrowing. However, there are too many factors that are specific to children's books to consider generalizing the Bi Sheng into that niche without considerable further study.

Respondents saw the value of electronic media for 3D, interactive, and large reference works. Since the first two classes of material represent areas in which the Bi Sheng would be competing with the computer rather than with the conventional bound book, they would require further study before being adopted as features.

The comment that one respondent made concerning the increased amount of reading done while sick suggests that there may be a role for the electronic book in hospitals. This would require further investigation and development.

Prototype electronic book design

In explaining the solution that I have developed to the problem of positioning the design of an electronic reader for frequent readers of conventional books, I have drawn on five sources of information: my own intuition; extensive informal conversations with a variety of people; a literature review; a Web survey; and a pair of focus group sessions. The design solution involves three parts: the book itself, the printer, and the software, and is based on a small set of primary design objectives and a somewhat larger number of implications related to those objectives (see Table 1: Design criteria grouped by objective). There are also some related topics which are discussed briefly at the end of the section.

Table 1: Design criteria grouped by objective

The primary objectives are an overall framework that I used for the design. They are very general. When I say “like a book,” for instance, I cannot be suggesting qualities that would apply to every book, since conventional bound books show wide variation. What I do mean to suggest is that the the electronic book should have as many as possible of the observable qualities of an average but relatively physically attractive conventionally bound volume.

Primary Objective	Specific Implication	Applied (Y, N, Maybe)
Like a book	portable	Y
	lightweight enough to hold in one hand	Y
	easy to use	Y
	inexpensive	Y
	annotatable	Y
	bookmarkable	Y
	available in a variety of sizes and shapes	N
	physically attractive	M
	display of an individual cover with author, title, cover design, indication of genre, blurbs, reviews, and information as to whether the book is part of a series.	Y
	easy suspension and resumption of reading	Y
	easy subsequent reference to particular sections	Y
	the principle of lending, borrowing	Y
	test driving books	Y
	giving books as relatively inexpensive gifts	Y
	any material currently available in conventional bound form – fiction, nonfiction, scholarly apparatus, and illustrations.	Y
	turnable pages	Y
	some organic element - smell or feel	N
	a warm page tone	M
	reading while sitting or lying down	Y
	public display	Y
	being “stamped through use”	N
	quick scanning	N

Table 1 cont.

With computer features	interactive	M
	search functions	Y
	variable formatting	Y
	rapid updating	Y
	don't forfeit the advantages of digital text	M
	susceptible to electronic processing	Y
	a dictionary	N
	high resolution	M
	fast response	N
	large print	M
	fast access	N
	retrieval of the most up-to-date references	M
	retrieval of material only available digitally	Y
	return of annotated documents to the computer	Y
	distribution through both new and used bookstores	Y
	display of short documents	Y
	the user collecting material for display	Y
Avoiding computer drawbacks	It should not	
	involve any display technology that generated light	Y
	crash	Y
	display commercials	Y
	need batteries in order to read it	Y
	cause eye strain	Y
	make noise	Y
	be like a machine	Y
	involve scrolling	Y
	require CDs	Y
	come with preloaded collections	Y
	have windows with menus	Y
	patronize the reader with simulated features of conventional bound books	Y

Table 1 cont.

With optional features	motion	N
	sound	N
	semantic tagging	N
	word frequency analysis programs	N
	a connection to overhead displays	N
	two models: one for display and one for reuse	N
	waterproof	N
	It need not	
Topics requiring further study	come in folio size	Y
	provide news display	Y
	children's books	
	3D graphic capabilities	
	interaction	
	use by hospital patients	

Description of the book

The design features of the book itself have been divided into three levels: basic, advanced, and deluxe. The basic features are fundamental – the design would be a completely different solution without these items. The advanced features are very important in that they include many of the functions by which the electronic book distinguishes itself over the conventional book. Their removal from the implementation could be expected to reduce sales, but would not radically alter the design. The deluxe features are bells and whistles, which could serve to attract some additional attention and meet some niche needs, but which might be considered optional or even expendable in early models.

Basic features

Summarized below are the features that are fundamental to the design of the Bi Sheng (see Figure 9: Electronic book and printer with computer).

Signatures

Each Bi Sheng will consist of several signatures, bound to each other by a tongue-in-groove strip that forms the spine of each signature. The back faces of the strips on the signatures together form the spine of the book. The number of signatures required will be determined by the length in pages of the longest title stored (see Figure 10: Electronic book being assembled using tongue-in-groove mechanism on spine).

The result is a book which will be as thick as the number of signatures required. Once the signatures are assembled, upper and lower boards are attached by means of the same locking system, and a cover image is loaded into the boards and spine.

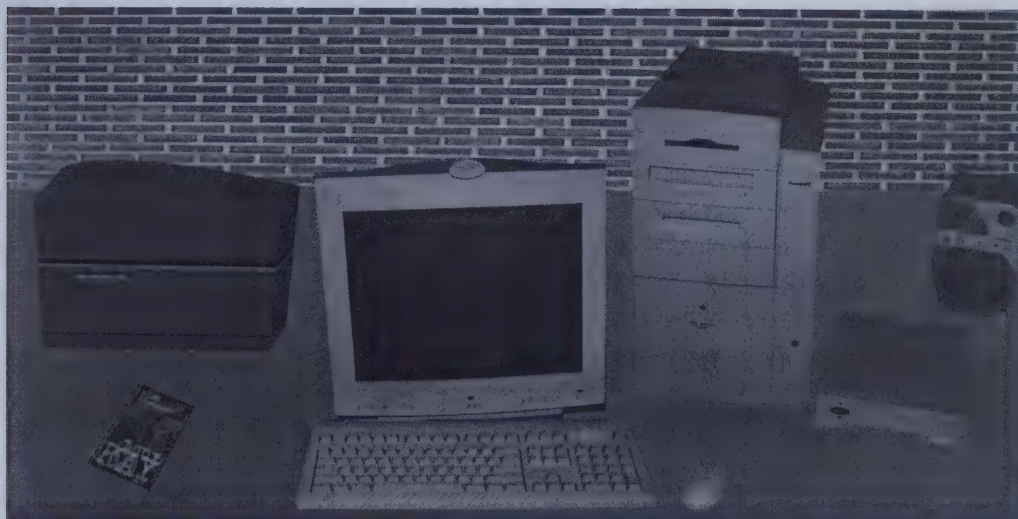
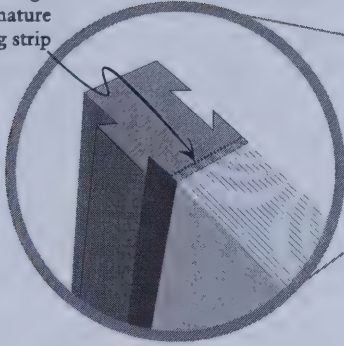


Figure 9: Electronic book and printer with computer

Each page of
electronic paper
is wired through
the signature
binding strip



as many 32-page
signatures as required
slide into place
to complete the book

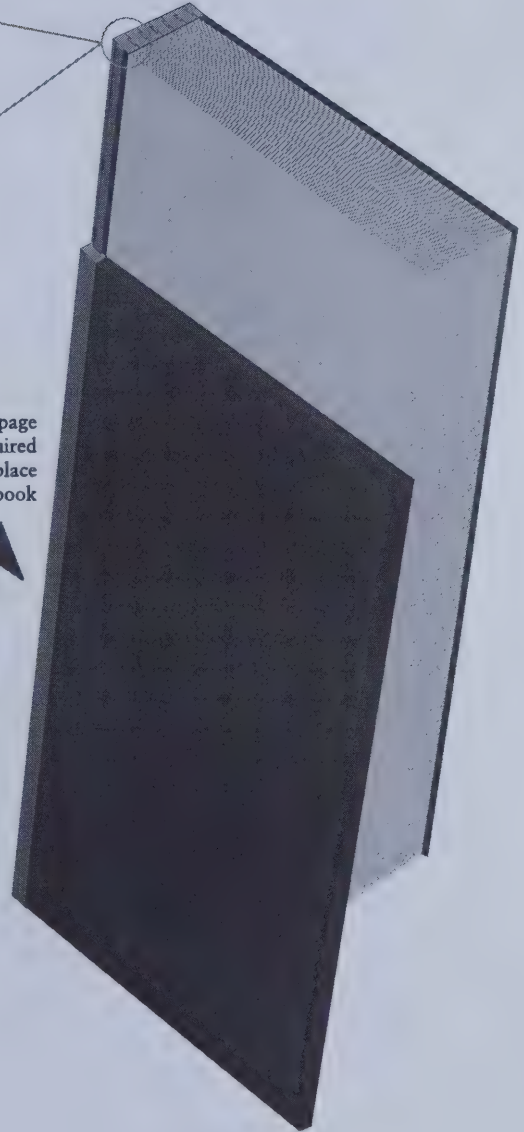


Figure 10: Electronic book being assembled using tongue-in-groove mechanism on spine

Signatures are advantageous in that they provide an additional strength and stability to a book, as opposed to cut sheets which are more apt to be torn loose. They are also easier to bind, since the locking mechanism can be firmly affixed through the punctured stack in a manner similar to that used for Smythe sewing of hardcover books. The locking mechanism also provides points of contact for the leads that are used to connect the signatures electronically to the computer.

In terms of page size, the signatures could originally be available in one standard size, roughly corresponding to the dimensions of a trade paper book – 8.25 in. by 5.5 in. This choice of size allows for a reasonably sized text block, even for large print display, without compromising too much on portability. It is also familiar to most North American readers and should therefore seem less alien to their physical expectations than, for example, a square design might be.

The advantages of a standardized signature size lie in mass production and simplified handling, since the associated hardware and software need to accommodate only a single format. The disadvantages relate to the reduction in variability, since readers are currently used to having bound books available in a wide range of sizes and shapes.

A possible future enhancement might therefore provide a range of sizes, with one printer handling the digital equivalent of duodecimo, octavo, and quarto, and perhaps a special alternative printer available for folio, tabloid, or even broadsheets. The latter device did not seem to have any particular appeal to the individuals who participated in the focus groups, who felt that newspaper reading, at least for them, did not necessitate a newspaper-sized sheet, and as for art or coffee-table books (which are among the most popular folio applications), they seemed to feel dubious that any digital display technology could adequately replace the high quality paper and colour quality that are intrinsic to the form.

The signatures consist of a gathering of eight sheets, or 32 pages, bound with a connecting strip up the spine. The 32-page signature is a somewhat arbitrary decision with two primary consequences. It means that the most a given book will be short of the length indicated by the Bi Sheng is 31 pages. It also allows the user 32 pages of range when selecting titles that will be bound together, since the principle is that the physical size of the Bi Sheng should indicate the length of its contents within the bounds of a single final signature. Titles of lengths varying by more than 32 pages can of course be stored together, but the software should issue a warning before the books are downloaded to the printer.

Spine assembly mechanism

The signatures use a tongue-in-groove system, with each of the suspended signatures sliding out of the storage area of the printer and into the assembly area, where they slide into place up to a locking stop in the side of the previous locking strip, near the foot. The upper and lower boards similarly slide into place, or rather one board would serve as the foundation for the assembly process and the other board would cap it off.

An alternative strategy would be to use a clamping mechanism to provide the greatest possible strength to the spine, with clamps spaced in roughly the positions that would have been occupied by the tapes in a traditional sewn book. This would help safeguard the finished book against the possibility of the spine buckling, which can sometimes be seen in tongue and groove flooring that has been under stress.

Unfortunately, a system using clamps would also require a considerably more complicated system for assembling the signatures and boards, with more moving parts than would be necessary for a process that slides the signatures into place.

Multiple pages

The idea of using multiple pages rather than a single display screen may strike some people as too literal an interpretation of the characteristics of a bound book. Although my intuition and studies are far from definitive in their coverage, insofar as they are

useful at all they are unanimous in confirming that it is impossible to err on the side of too literal an analogy. People feel a strong emotional bond to the form of the book – they are comfortable with an object that has hundreds of pages and a cover. Respondents in both the survey and focus groups specifically mentioned the pleasure of turning pages and of marking their place with a finger inserted in the body of the book

A book without pages forfeits several other functional advantages which were mentioned by participants, including the ability to quickly and easily estimate overall length, and to continuously monitor for proportion completed. Simplicity of backtracking for the purpose of re-reading previous paragraphs or pages is also a factor, as is physical recall of page position and the visual appearance of individual pages of type, which are used by some proficient readers for quick subsequent reference.

It would be possible to design a book with only a few pages, which would allow users the comfort of turning a page physically while not requiring the more elaborate strategies of allowing for books of varying length. But a fixed-page design similarly forfeits the functional advantages that are lost in single-page models, and somehow leaves the impression of a solution carried only part way, perhaps for reasons of economy. It also seems less natural in terms of replacing worn or damaged pages, which follows readily in a model where variable numbers of signatures are used. Designs with virtual as opposed to physical pages also run the risk of appearing to condescend to the reader by assuming that a simulation can adequately replace the actual experience.

One disadvantage of signatures is that they will invariably result in books with some blank pages at the end, but some adjustment can be made through the design of the loading software, which could be equipped with flags that warn the reader when a particular design is going to cross a threshold of acceptability in terms of blank pages. And in the worst case scenario the number of blanks would not exceed one page less than a complete signature, which is not impossible even among (albeit poorly-designed) conventional books.

The disadvantage of having the physical length of the assembled book different from the size of the title being displayed is exacerbated in the case of the storage of multiple titles of varying length (see “Multiple titles,” below), since it is impossible to gauge one length that would suit widely differing lengths of titles without drastically modifying the typography. However, the user who felt strongly about the necessity for a close match between book length and book thickness could ensure that they are within the limits of a single signature by simply storing single titles in each Bi Sheng.

Electronic paper

The electronic paper used in this model is non-volatile – that is, it will display its contents in a static form for an indefinite period, requiring the application of current only when it is being cleared or loaded with an alternate text for display. The visual flicker caused by monitor refresh cycles is a factor in the irritation reported by many people who have been required to read from a monitor.

The paper also has a reflective surface which mimics more closely the qualities of actual paper. For instance, the reader would need to provide a light source in order to see the pages, in much the same way a light source is currently required for reading from paper. Ideally the electronic paper should mimic as closely as possible the physical attributes of high quality rag paper. It should have a texture like paper and a thickness and flexibility that allow it to bend fairly easily. It should either have itself or allow for a display option that gives it an attractively warm tone, either a chamois or ecru. It should not be so stiff as to make the reader think of plastic.

If annotation is an option that is implemented, it will be necessary for the pages to be able to record input from a digital stylus. This technology is already in place in the case of digitizing tablets and touch-sensitive screens, but would require additional development in the case of the current designs for electronic paper. It may also

necessitate the inclusion of a power source, although if the electronic paper used is based on magnetic polarities it might be possible to provide an annotation mechanism that uses a magnetic rather than an electric stylus.

Another advantage of electronic paper is the comparatively low cost of additional or replacement signatures, which has been estimated by some sources at pennies per page. One of the facts that arose both in the focus groups and the survey responses was that although people are willing to own portable electronic equipment, it becomes a source of anxiety simply because of its replacement cost in the event of loss, theft, or damage.

In terms of resolution, the lower limit should be higher than the 72 dpi provided by a standard monitor. The Rocket eBook lists a resolution of 106 dpi and the fonts are more bitmapped than is usual on a monitor. Probably resolutions comparable to the images used for offset printing (that is, roughly 300 dpi) should be considered the minimum acceptable.

Concerning suppliers of electronic paper, which is one of the keys to the success of the design of the Bi Sheng, there are at least four research organizations currently working on prototypes. These are Cambridge Display Technology, Iridigm Systems, Planar Systems Inc., and Xerox Palo Alto Research Center.

The versions from the first three developers are intended primarily as extremely thin monitors, with varying physical characteristics depending on the technology involved. The Organic LEDs being prototyped at Cambridge Display Technology, for instance, are thin plastic-like sheets that can be rolled up and are intended for very inexpensive mass production. Planar Systems, on the other hand, is primarily interested in high resolution at light weights for military applications. Their Active Matrix Electroluminescence (AMEL) displays are essentially monitors on rigid silicon chips. Iridigm Systems is concerned with reflective display technology, and has therefore been developing an iridescent thin screen for use in small-sized applications like calculators and pagers.

The version of electronic paper from Xerox PARC, on the other hand, is intended as electronic paper. The Xerox e-paper is based on a material called gyicon, which is essentially millions of tiny beads contained in an oil-filled cavity. Each bead has a black side and a white side, and the beads are dipolar so they can be aligned by a current. The e-paper is thin, flexible, and reads by reflected light (see Figures 11 and 12). Xerox has already entered into a manufacturing agreement with 3M.

Upper and lower boards

Although it would be simpler and easier to provide a standard blank set of boards to protect the electronic signatures, it seems clear that the particular cover of a given book is an important feature and should not be neglected. This intuition was reinforced by comments made in the focus groups and on the survey, which might be characterized as apologetic but firm in the unequivocal statement that covers, however personally embarrassing it might be to make the admission, are important both in the initial choice of a book and in its subsequent enjoyment. Covers, that is to say, do not only serve the function of providing initial attraction to the potential buyer, but also add to the aesthetic appreciation of the book as a collected and treasured object.

In the case of the Bi Sheng the cover design that is displayed will be the design associated with the currently active title. Each title has its own cover and spine design stored along with the text, which is displayed on the electronic paper that is permanently fastened to the boards and along the binding strips up the back of each signature. When a new title is pulled from storage and displayed in the body of the book, its cover similarly is taken from storage and replaces the current cover display. The cover design will most likely be stored in one of the common cross-platform image file formats, such as TIFF or EPS.



Figure 11: A roll of electronic paper from Xerox PARC

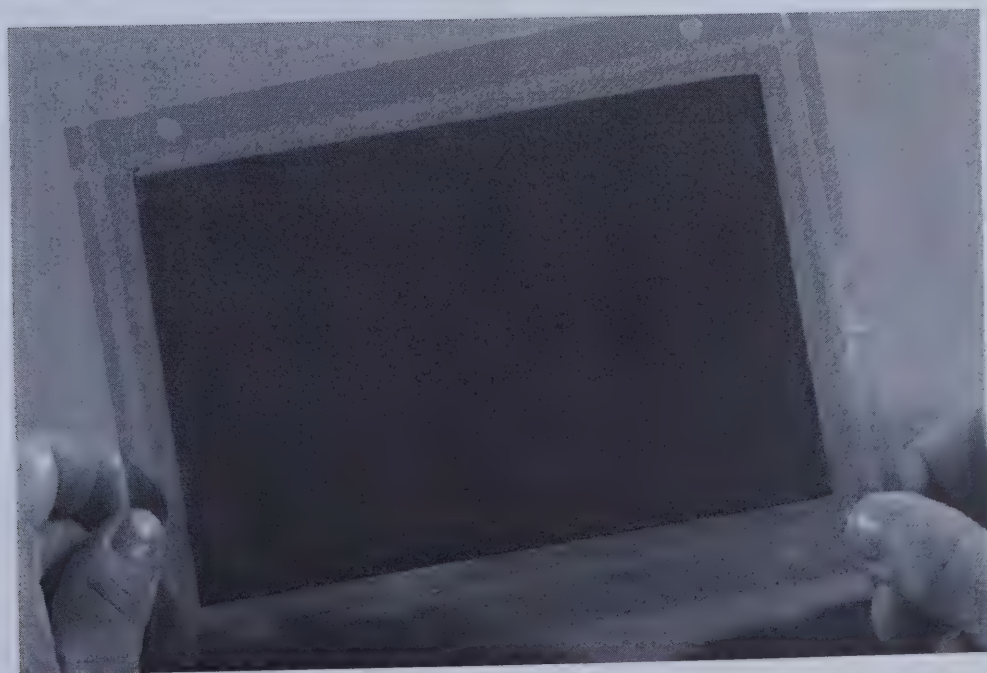


Figure 12: Xerox e-paper closeup

Because not every book will have a cover design,¹⁴ and because the Bi Sheng will sometimes be used for anthologies that are collected by either the reader or else a professor for a class, as in the current course packs used in the Department of English at the University of Alberta, the Bi Sheng also comes with a choice of default cover designs, one of which privileges the author and the other the title (see Figure 13: Printed electronic books with generic and custom cover designs).

The boards are stiff like the boards on a hardcover book, which increases their weight but also makes the book more resistant to damage. The edges of the boards extend slightly beyond the edges of the signatures in order to provide the kind of protection that boards have always provided for the book block.

Different people in the survey and focus groups had different ideas about the value of hardcover books, with more than one person stating outright that their preference was for trade (that is, higher-quality) paperbacks. The majority were of the opinion that hardcover books were preferable to softcovers, implying as they do superior quality and durability.

The other function of making the boards actually stiff as opposed to simply thicker versions of the electronic paper is that they are clearly covers, rather than simply being the upper sheets in a stack. In this respect it might be said that covers make a book.

The outside surfaces of the boards are covered with electronic paper, with the one significant difference that although the signatures that comprise the body of the book do not require colour, every effort should be made to provide a colour version of the electronic paper for the boards. In this I have only my own intuition to draw from, since I did not explicitly address the question of whether covers could be greyscale in either the focus groups or the survey. But insofar as colour covers are currently the norm for conventional bound books, it is highly advisable to make them available for the Bi Sheng.

Spine

The spine of the book is formed by the outer surface of the locking mechanism on the signatures. It perforce consists of a series of strips running the length of the spine, with small seams between the strips. The spine image is displayed on these strips through an arithmetic calculation performed by the software to divide the image file appropriately. There is not within my experience any software of this kind, which would need to be written to provide the conversion of a solid image into a set of thin strips (see Figure 14: Detail of spine).

One alternative would be to leave the spine blank, or else provide a simple default design for the spine. In fact this default will need to be available, since some body texts will not include cover or spine designs. But the emphasis placed by various respondents on the importance of cover design suggests that every effort should be made to provide individual title designs rather than relying in every case on a generic or even blank spine.

Another possibility is to leave the spine and boards blank, and to provide instead a wraparound dust jacket made from electronic paper. The primary difficulty to be addressed in that case would be in making the dust jacket's spine the right width for the number of signatures in the book.

¹⁴ HTML titles retrieved from existing web sites are one example.

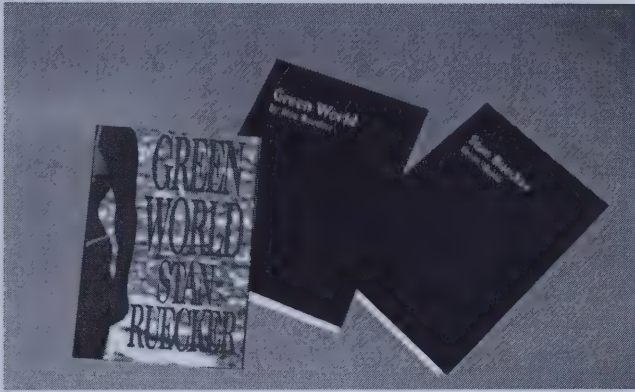


Figure 13: Printed electronic books with generic and custom cover designs



Figure 14: Detail of spine

Advanced features

The following features provide some of the functionality that could give an electronic book an edge over conventional bound books. Although not fundamental to the design, these functions are quite important and should be implemented at an early stage.

Power supply

The first feature that is necessary in order to provide any kind of interactive processing is a power source. The basic design assumes that power is applied at the time of printing. But the advanced features necessitate a portable power supply that is sufficiently robust to modify the signature and board displays, as well as powering the processing behind various procedural activities.

The Bi Sheng could come with an AC adapter, a rechargeable battery, or solar cells. Solar cells could probably be incorporated along the inside edges of the upper and lower boards in such a way that the text block composed of the signatures of electronic paper would not occlude them from a light source. Since the reader would require a light source in order to read, the solar cells would naturally have light to draw from.

Multiple titles

Optionally included in the printing process is the ability to store a number of additional texts¹⁵ for subsequent display without reprinting. These titles are listed on a special multibook contents page in the front matter, which also has the triggers to change the display from the currently active book to one of the alternate titles (see Figure 15: Multibook table of contents). The storage mechanism for the multiple titles could be kept in one of the boards. It would also be possible to provide a mechanism for storing and loading alternate titles in some form of removeable cartridge which would in turn be loaded from the computer.

The primary disadvantage of the ability to store multiple titles is that occasions will inevitably arise on which readers want to store books that vary in length from each other by more than a few pages. The simplest solution is to allow collections of books of any length, and determine the necessary number of signatures in a given assembly by the number of pages in the longest title – regardless of whether that happens to be the title that is chosen as the currently active one at the time of assembly.

The reader who chooses to assemble this kind of collection will naturally be forfeiting some of the advantages of a multi-page electronic book, in that the physical length will be an accurate indicator of overall length only in the case of the longest title and those closest to it.

There are a couple of possible strategies to alleviate this problem. One is to allow the reader to generate anthologies (see below). Another is to have the last page in a particular title marked along the edges with a dark strip in order to indicate where a given display ends. Needless to say, this marking is only a second-best solution to having the book's physical length correspond to the title it is displaying, but it is better than leaving the end unmarked altogether.

¹⁵ The number of texts will naturally depend on the storage capacity of the particular medium used for storage (see "Memory" below). But a reasonable amount of memory is currently available. The Rocket eBook, for example, supports up to ten novels in its native storage, and can be upgraded with additional memory to hold even more.

The following titles are currently stored.

(click with the stylus to display a particular book).



Freedom in Exile (320 pp)

H.H. the Dalai Lama



currently
displayed



The Code of the Woosters (222 pp)

P.G. Wodehouse



The Log from the Sea of Cortez (225 pp)

John Steinbeck



To Kill a Mockingbird (281 pp)

Harper Lee



Worst Fears (208 pp)

Fay Weldon



**The Hitchhiker's Guide
to the Galaxy** (216 pp)

Douglas Adams



Bluebeard (320 pp)

Kurt Vonnegut, Jr.



Women (290 pp)

Charles Bukowski

Figure 15: Multibook table of contents

Anthologies

In addition to being able to store multiple titles within a single electronic book, the Bi Sheng should also allow the user to collect short documents together into a single title. This feature is particularly important for graduate classroom use, where students and professors routinely refer to items from course packs, which are collections of photocopied material originating on fiche, in conventional printed sources, and off the Internet.

Search function

The Bi Sheng also includes a search function that uses a text search for the currently active book in order to produce an index of successful matching text strings. Searching is important enough that it might be necessary to incorporate it as a standard feature, but it also presents some particular difficulties because of the multi-page design.

Rather than having the electronic book bring the results of the search forward into the search page, the result would take the form of a generated list of page numbers, possibly with some context provided for each entry as in a standard concordance program. The reader would then be required to flip to the appropriate point in the book as indicated by the page number. This is directly analogous to the process used in a conventional bound book (see Figure 16: Search page with simulated results), with the significant advantage that the search string can be highlighted in the text of the destination page.

There are basically two options for providing the Bi Sheng with the search string. One possibility is to allow the user to print the search string using the digital stylus, and to have the software interpret the handwriting in much the same way the Apple Newton already works. The alternative strategy is the one employed by the Rocket eBook, whereby the user types on a miniature keyboard displayed on the touch screen. My personal feeling is that handwriting conversion is a superior method, but it would be useful to perform a study with members of the frequent reader cohort during the prototyping phase.

Annotation

Adopting the model of marginalia in conventional books reading pen in hand, each bound Bi Sheng will come with an electronic stylus that allows the reader to write digital remarks directly to the pages of digital paper (see Figure 17: Digital stylus). In laptop-based designs a single stylus would of course be adequate, but in the case of the Bi Sheng it is possible to print an indefinite number of books at the same time, and each book would require its own pen, which would be stored in a slot in the lower board.¹⁶

The reader's annotations, underlines, or illustrations – in short, any marginalia or page marks of any kind – would be stored in conjunction with the text on display, so they could be retrieved again when the text was subsequently overwritten with an alternate stored title, then redisplayed. The printer also allows the user to upload the contents of the Bi Sheng back into the computer with annotations intact.

The need for providing a mechanism for annotation arose both in the focus groups and in comments made in the Web survey. It is not a mechanism that would have seemed necessary to the designer, since I have never annotated or marked in any way my conventional bound books. One possible advantage (which was suggested by the focus group participants) of having the annotations stored and later copied back to the computer is that people might be able to begin exchanging annotated versions of texts, either through E-mail or via the Internet.

¹⁶ The Rocket eBook similarly has a stylus that slides into a storage clip inside the spine.

Search Results for Moby Dick

Search has found
17 entries
for the string:

tattoo

Results 1 to 15 of 17 displayed

who, falling among the cannibals, had been tattooed by them.
I concluded that this harpoonner p. 21

completely independent of the squares of tattooing. To be sure,
it might be nothing but a good coat of tropical tanning p. 21
stood looking at him a moment. For all his tattooings he was on
the whole a clean, comely looking cannibal. p. 24

odd little parti-colored squares and triangles; and this arm of his
tattooed all over with an interminable Ocean labyrinth p. 25

You cannot hide the soul. Through all his unearthly tattooings,
I thought I saw the traces of a simple honest heart p. 49

Queequeg now and then affectionately throwing his brown
tattooed leg over mine, and then drawing them back p. 52

cried Queequeg, twisting his tattooed face into an unearthly
expression of disdain p. 60

Here be it said, that many tattooed savages sailing in Nantucker
ships at last come to be converted into the churches. p. 87

which was tattooed upon his arm; so that through Captain
Peleg's obstinate mistake touching his appellative p. 89

If all cruisers that crossed their wakes in the vicinity of the
Tattoo Land? Was it not so, O Morquan! p. 202

one kind of world, you see. Dodge again! here comes Queequeg
-- all tattooing -- looks like the signs of the Zodiac himself p. 431

copied verbatim from my right arm, where I had them tattooed;
as in my wild wanderings at that period p. 449

a poem I was then composing -- at least, what untattooed
parts might remain -- I did not trouble myself with p. 449

tripped to his woollen drawers, the tattooed savage was crawling
about amid that dampness and slime p. 473

Back

More

Figure 16: Search page with simulated results



Figure 17: Digital stylus

On a commercial level, it may even be valuable to have available for resale some of the electronic copies that have passed through the hands of domain experts or even celebrities, in much the way that the zen classic *The Mumonkan* or Sun Tzu's *Art of War* are often available with several layers of commentary surrounding even printed versions of the text.

Another possibility is that users might want to collect portions of the text to use as study notes. This level of word processing is probably more effectively undertaken on the computer, although it may be possible to provide some marking system whereby the reader could highlight pieces of the text with the digital stylus for subsequent uploading to the computer.

In order for the annotations to be subsequently interpretable to the software for purposes of storage and searching it will be necessary for the Bi Sheng to provide handwriting (or rather, printing) conversion. Existing devices employing this sort of technology include the PC-based Palm Pilot and the somewhat more sophisticated Apple Newton.

Additional pages in the front matter

In order to facilitate several of the advanced features, it would be a reasonable solution to incorporate their interfaces into specialized pages in the front matter. This location allows the body of the book to serve as a working surface, whereas placement in either of the boards or as an appendix would tend to require the reader to work at a table in order to keep the entire book comfortably balanced.

The question then arises as to how the various functions are activated. One possibility is to use touch-sensitive paper for these particular pages. The disadvantage of that solution is that the reader might inadvertently trigger some functions in the course of handling the book.

An alternative solution makes use of the electronic stylus that is provided with each book for purposes of allowing annotation. If the reader needs to use an electronic stylus rather than a fingertip, there is less danger of accidentally initiating any of the processes available with the book. There is also a physical analogy that will be familiar to everyone using the book, in that annotation on paper requires a pen or pencil.

So in addition to the standard table of contents page, for example, there would also be a table of stored titles, with a thumbnail version of the cover shown next to each title. In order to unload the current title and load one of the stored titles, the user would activate the thumbnail by touching it with the end of the stylus that is stored in the lower board.

The other specialized pages in the front matter would provide the other advanced or deluxe features which require an active interface – such as search, grep, and any text analysis programming.

Deluxe features

The deluxe features are those which would serve either a niche market or else the needs of a fairly sophisticated body of users. They could be numbered among the functions that might reasonably be implemented in a second generation design rather than in the original release of the device.

*Grep*¹⁷

Additional functionality is provided in the form of a grep-like procedure which performs searches across the stored titles. Since only one of the titles is currently on display, the results would be displayed on a special grep page that would reside among the front matter (see Figure 18: Multibook search page with simulated results).

¹⁷ Grep is the standard unix search routine for traversing the contents of multiple files.

To Search Multiple Titles

1 Please enter
search string
with stylus

fish

2 Touch icons
with stylus
to select titles
to be searched

3 Press Search

Search



Freedom in Exile (320 pp)
H.H. the Dalai Lama



The Code of the Woosters (222 pp)
P.G. Wodehouse



The Log from the Sea of Cortez (225 pp)
John Steinbeck



To Kill a Mockingbird (281 pp)
Harper Lee



Worst Fears
Fay Weldon



The Hitchhiker's Guide to the Galaxy
Douglas Adams



Bluebeard (320 pp)
Kurt Vonnegut, Jr.



Women (290 pp)
Charles Bukowski

Multibook Search Results

Search has found
the following entries
for the string:

fish

Touch icon
with stylus
to display
details

Press Back
to return
to search page

Back

18 entries



Freedom in Exile (320 pp)
H.H. the Dalai Lama



The Code of the Woosters (222 pp)
P.G. Wodehouse

76 entries



The Log from the Sea of Cortez (225 pp)
John Steinbeck

no entries



To Kill a Mockingbird (281 pp)
Harper Lee



Worst Fears (208 pp)
Fay Weldon

7 entries



The Hitchhiker's Guide to the Galaxy (216 pp)
Douglas Adams



Bluebeard (320 pp)
Kurt Vonnegut, Jr.



Women (290 pp)
Charles Bukowski

Figure 18: Multibook search page
with simulated results

SGML interpreter and editor

HTML (HyperText Markup Language) is the basic document definition language for Web formatting. Structured Generalized Markup Language (SGML) is the coding standard for electronic texts, which allows both developers and readers to include additional semantic-level encoding that can be hidden or displayed with an appropriate reader.

SGML tags can also be used as the basis for searches, as well as for the entire range of text analysis functions from frequency analyses to concordancing and natural language interpretation. XML (eXtended Markup Language) is a subset of SGML, and HTML can be considered a subset of XML.

Providing the Bi Sheng with an SGML interpreter would therefore (with perhaps a few tweaks of the software) also allow the system to display HTML and XML. It would on the one hand open up some of the richness of existing SGML encoded texts to the book reader, and on the other hand would allow the reader to undertake SGML marking of the currently displayed text, for subsequent uploading to the computer. This kind of marking would allow the user to identify links between different portions of the displayed text, as well as to define semantic terms whereby subsequent readers might perform more sophisticated searches.

As with text analysis functions, however, there is a reasonable argument to be made that the processing required could be relegated to the computer proper, rather than to a specialized reading device.

Motion

Although motion is definitely not part of the traditional book, there is the possibility that the option might appeal to some readers, especially if it were to meet the following criteria:

- 1) it is under the reader's control, perhaps triggered with the stylus
- 2) it does not require moving parts in the book

More than one of the survey respondents mentioned that one of the virtues of the book is that it is static and quiet, as opposed to electronic devices, which routinely involve motion and sound. During the second focus group session the same point was also made by one of the participants, who said she would only consider an electronic book insofar as it did not seem like a machine.

All but the Xerox PARC versions of what might be a potential electronic paper include motion, since they are being developed as replacements for monitors.

Sound

Sound is similar to motion in that it is not a feature usually associated with conventional bound books. There are, however, a growing number of titles available in audio cassette form, where books are read out loud by their authors or by celebrities of various kinds. In addition to audio text there is also speech synthesis (see below) as well as the related precedent of including sampled sounds and music in multimedia documents. Since the Bi Sheng is intended to serve as a supplement to conventional bound books, the provision of sound in any of these forms is not essential, but would extend the functionality of the Bi Sheng beyond that provided by the conventional bound book.

Speech synthesis

Speech synthesis has been successful for several years as a niche commodity, primarily for people who are visually impaired. In order to meet the basic criteria for acceptance in that market, it is necessary that the reader have variable speeds, since experienced users tend to prefer replay rates that are considerably faster than those used in conversational speech. I spent several years as a consultant in the area of special needs

technology, and had a number of blind clients who routinely listened to digital speech at rates that were indecipherable to me.

Speech can be provided by a combination of software and hardware, some of which is available on relatively small plug-in cards, not much bigger than a credit card, although a speaker or at least earjack is also necessary. The logical place to locate this combination of equipment and connectors is in one of the boards, which might be sold as a specialty item compatible with the general system.

Colour in signatures

Although colour within the body of the book seems a likely candidate for inclusion as an advanced rather than deluxe feature, the focus group participants were certainly not enthusiastic in endorsing its necessity. Colour in conventional bound books is associated with the relatively vertical niche of the art book or coffee table book – for the vast majority of novels and reference works (such as dictionaries and thesauri) it is superfluous, although illustration does play a role in some nonfiction.

Text analysis programs

Although as of this writing the Humanities have still not seen widespread adoption of text analysis software, there is a growing body of users for whom the generation of statistical text data is a natural part of dealing with a certain class of textual problems. Word frequency lists, concordances, collocation analysis, and at some point natural language analysis functions are all possibilities for inclusion on the software list available for use with the Bi Sheng.

However, since most of these procedures are for a somewhat rarefied user base, it is not unreasonable to leave them, at least for the time being, to the computer proper rather than attempting to define any specific method for incorporating them into the portable electronic reader.

External display port

There may be certain applications, especially in the boardroom or the classroom, where connection to an external monitor or overhead display would be desirable. For these situations it might be worthwhile to provide the Bi Sheng with an external docking port that would sense which pages were currently open and project the contents of the spread onto the screen. The Rocket eBook, for instance, has an optional infrared port that provides this function for devices that can accept the infrared signal.

Page tone adjustment

Because the Bi Sheng is a digital display device, it is amenable to a number of the adjustments that are currently only associated with monitors rather than with printed pages. One of these adjustments that might be somewhat useful would be a page tone slider, where the user can decide how white or creme the electronic paper is independent of the text. The advantage of being able to adjust page tone is that the reader can set the book according to the current lighting conditions, with a creamier page under direct sunlight to reduce glare, and a whiter page when the lighting conditions are not as bright.

To change the page tone, one possibility is to have the user move a slider bar on an electronic adjustments page in the front matter of the deluxe edition.

Memory

In order to show multiple titles, the Bi Sheng will require an electronic storage capacity. Non-volatile memory is memory that does not require power to maintain its contents, although power is necessary during the reading or writing process. Hard drives and CDs are standard examples. Unfortunately, most current models of non-volatile

memory require motion during reading and writing. Any mechanism that involves motion will inevitably result in sound and vibration in the device, and would therefore to that extent move back down the spectrum from a book-like solution towards a more laptop-like design.

One of the current alternatives to CDs and hard drives is volatile memory, of which RAM is the most common example. RAM requires a considerable current to maintain its contents, necessitating either a battery pack, or else some form of solar cell – which would make sense in that the reader would require a light source in order to read in the first place.

The primary disadvantages of batteries are that they are heavy and expensive, and in spite of some improvements over the last ten years in storage duration, are not altogether satisfactory as a power source even for laptops, much less for an electronic book which might sit on a shelf indefinitely before being needed.

Solar cells may represent a more viable alternative, in that they could be built into the strip around the insides of the boards that sits outside the signature block. In that position they would necessarily receive at least some light as the reader used the book.

There are also data storage alternatives of a semi-volatile nature such as Flash RAM, which require only a comparatively small trickle current. Like RAM, these semi-volatile storage strategies do not require motion during reading and writing and are therefore silent during use.

Content design

Once the hardware has been designed, there are still a number of questions to be addressed regarding the form that the content will take. There are several pairs of decisions to be made:

- Should the titles be proprietary or public domain?
- Should titles be designed specifically for the Bi Sheng or generic?
- Should the pages be in text form or image form?
- If they are in text form, to what extent should the user be required or permitted to make document design decisions?

My preference is to make the content characteristics as flexible as possible.

Accordingly, the Bi Sheng should be able to accept texts from a wide range of sources, whether word processed, HTML encoded, SGML encoded, or from a wide selection of page layout programs.

I base the decision to privilege flexibility on my own intuitions about the various uses to which I would like to put an electronic book, and also to some extent on the wide range of opinions I found in the focus groups and survey. Book readers are not a homogenous whole with identical needs – on the contrary, they seem to be quite a mixed crowd, as might be guessed from looking at the variety that exists in conventional printed books.

The Bi Sheng should be able to display books that are printed from any existing application, in much the same way that a laser printer can handle text from a number of applications. Like a laser printer, the Bi Sheng printer would accept pre-formatted text – in this way whatever formatting decisions are required can take place while the text is still on the computer, rather than once the titles are loaded into the Bi Sheng. Font changes, for example, would be made prior to printing, rather than after, and the required display fonts would be downloaded to the Bi Sheng along with the text.

One possibility for the page layout process is outlined in some detail by Karsten Lücke, who posits a software assistant for an on-demand conventional printing system – an assistant which could just as readily be incorporated in the printing routine for the Bi Sheng. In Lücke's software a professional book designer provides a default layout and a

set of suggestions that the operator at the client end can either accept or override, depending on their level of expertise and interest. Lücke's proposed system has the virtue of providing maximum flexibility without forfeiting simplicity for the users who prefer to just go with the predefined default.

Description of the printer

The Bi Sheng printer is physically and procedurally modelled on a standard laser printer, which serves the purpose of providing users with an analogy to equipment which computer users, at least, are more likely to already know, and therefore to give them a level of comfort with the downloading process. The Bi Sheng printer differs somewhat from a standard printer, however, in that the interface works both ways – users can not only download texts from the computer to the Bi Sheng, but can also upload the Bi Sheng contents back into the computer in order to preserve annotations and other stored material prior to disassembly.

Installing the printer involves the two procedures used for most external devices: physical attachment, and the installation of related software. The user attaches the printing device to a computer through the parallel or printer port. As with laser printers, the electronic book printer would be platform specific, working on either Windows or Macintosh platforms but not normally both, unless a special investment were made by the manufacturer in a dual interface – as in the Epson product line, or in some Hewlett-Packard printers.

The printer consists of a large compartment with a lid, which is in turn divided into two parts. The first part contains a rack where the unwritten and unbound signatures of electronic paper hang from the ends of their binding strips. It also contains several pairs of unattached upper and lower boards which are similarly suspended. Each upper board contains non-volatile memory for storing books that will be available but not currently displayed. Each lower board contains a battery pack for use in changing the current book, and also for use in functions such as searching and annotating.

The second compartment of the printer is the holding rack. It is used during the printing process to hold the parts of the book currently being assembled. It is also the compartment where the user places a book for unloading and disassembly.

Once the book is completed, the user opens the lid on the holding rack and removes the completed book. The alternative would be to have the book ejected from the printer in much the same way paper is ejected from a conventional printer. Since the books will be of variable thickness, however, and since in any case the user needs somewhere to put books for disassembly, a static rack with a lid seems like a reasonable choice.

Printing process

Since the Bi Sheng can store multiple titles, printing involves four tasks: loading the electronic copies of the books from the computer into the book's local storage; displaying the currently active book; attaching the covers; displaying the cover design for the currently active book.

From the perspective of the printing device, the printing process consists of the following steps:

- 1) print the signatures with the book which is to be currently active
- 2) load the memory with books that are stored for later display
- 3) assemble the printed signatures into a book by sliding the strips together at the spine
- 4) attach the upper and lower boards
- 5) print the spine and boards with the cover design for the currently active book
- 6) notify the user that the book is finished.

Software

The software for the Bi Sheng has two components. The first piece is a PPD or printer driver that allows users to generate their own books in a format the Bi Sheng can use. This PPD might reasonably be one of the existing file creation drivers like Adobe's Acrobat or the more generic postscript (.PS) file printer. Acrobat files have the advantage in being considerably smaller than postscript files, but they are also proprietary to Adobe, which means that a device adopting the format would probably need to arrange to pay royalties.¹⁸

Fortunately, the market for pre-printed file formats is a dynamic one, and other public domain alternatives are becoming available. So at this point it is not really necessary to specify in detail which format the Bi Sheng should adopt – enough to indicate that there are a number of possibilities, and a proprietary PPD could always be designed if absolutely necessary. In connection with format strategies, it should be noted that there is a distinction to be made between what are essentially image formats like Acrobat and postscript and what are designed to be document definition languages, such as (in increasing order of complexity) HTML, XML, and SGML. The latter set of protocols are specifically defined for cross-platform flexibility and are therefore not designed for rigid layout definition, although they are being used as the basis for display definition in some of the current electronic books.

The second piece of software is a dedicated application that allows the user to collect title and cover files into a set that will be bound together, and download them. Conversely, the application will also allow the user to upload titles back into the computer from an existing Bi Sheng (in case the reader wants to save annotations), and to delete selected titles from an existing Bi Sheng without totally disassembling the book, which would presumably still hold other titles.

The dedicated application also performs a number of utility functions, such as dividing the image file's spine into strips for downloading to individual signature spine strips. It should also alert the user if selected titles do not coincide in page count to within a signature or so, and provide alternatives such as downloading with a percentage reduction, so that the title does not require reprinting.¹⁹ It also needs to check that sufficient storage capacity is available in the board memory for the titles being chosen, and that there are sufficient signatures available to display a given book. Similarly, it should indicate clearly which will be the currently active book and which will be placed into passive storage.

The interface must allow the user to operate under the following normal conditions:

- printing a completely new book
- adding a new title to an existing book
- subtracting an old title from an existing book
- uploading from the book back into the computer
- erasing and disassembling an existing book for reuse of the boards and signatures

Uploading from the Bi Sheng

The data that is downloaded into the Bi Sheng for display is not necessarily the only data involved in the use of the electronic book. There is also a potentially wide range of textual apparatus that might be generated by the reader. Electronic annotations, SGML tags, saved results of searches, and even text characteristic analyses are among the possible forms of

¹⁸ For many years the postscript protocol was also proprietary to Adobe, which gave them a virtual monopoly on high quality digital fonts. The truetype standard more or less broke that monopoly in the late 1980s, and I am not certain about what became of the legal status of postscript in the aftermath.

¹⁹ Resizing the document will only be effective in the case of unformatted documents such as those created using HTML, XML, or SGML.

additional data which the reader may have created in the course of working with the various stored texts, and which would be lost if there were no facility for retrieving this information from the Bi Sheng and copying it for future reference on the computer.

There are a number of secondary possibilities that arise from being able to retrieve annotations. It would be possible, for instance, to create annotated versions of documents which were subsequently made available for redistribution. There is also the chance that the annotations themselves might be collected independently from the document they reference, as a form of course notes.

Related topics

Although not strictly speaking part of the design of the electronic book, there are many tangential areas which would need to be addressed in the implementation of the design. These include:

- Materials and cost
- Environmental considerations
- Marketing
- Copyright
- Security

Materials and cost

Although there is not much to be said in the way of speculating precisely concerning materials and cost, since the technology is not available in a robust release, it is nonetheless possible to make a few remarks by analogy. For example, the Bi Sheng printer is a device that in many ways will resemble a standard laser printer, insofar as the ports and case and general appearance are concerned, although there will necessarily be significant differences in the nature of the internal mechanism. However, it might be remarked that the price of the Bi Sheng printer should not exceed the cost of a standard laser printer by a wide margin, or the device will end up outside the scope of the small office or domestic market.

The individual signatures, boards, and styluses should similarly be priced within the bounds set by conventional bound books, since cost was raised as a limiting factor on several occasions in both the focus group discussions and in the survey. When electronic titles can be digitally printed in a Bi Sheng with a conformation similar to that of the conventional bound book, but offering superior functionality, all at a similar price, then the Bi Sheng may find its niche in the publishing world.

The primary issue from a commercial perspective is of course not so much cost of production for the manufacturer, as willingness to pay on the part of the consumer. Research designed to investigate willingness to pay might therefore prove useful in understanding the commercial potential of a product like the Bi Sheng.

Environmental considerations

Although the materials that comprise the Bi Sheng are in some cases still in the developmental stage, it is nonetheless still possible to make a few remarks about the environmental implications of an electronic book.

The most obvious suggestion is that a reusable book could reduce the necessity for paper, with all the lumbering and paper manufacture that entails. Theoretically this reduction should be an environmental advantage, but questions would still need to be raised about the degree to which the electronic book actually reduces the number of conventional bound books. It seems probable from the information gathered in this study that the conventional bound book will not be replaced, but that the electronic book will serve instead as a supplement for a variety of specialized applications. Insofar as the electronic book is only another electronic product, its environmental impact

would then need to be assessed in terms of its contribution to society rather than simply being accepted as an unmitigated improvement over paper.

In order to make any accurate assessment of the environmental effect of the Bi Sheng as a piece of technology, a detailed analysis would need to be undertaken to show the environmental impact of each stage of the product during its life cycle from manufacture through eventual disposal.

Marketing

The Bi Sheng is to a certain extent a hybrid device, combining features of the computer with features of the conventional bound book. As such it competes against these two difference poles. It will also be, at least potentially, in competition with the print-on-demand systems that are an alternative solution to the shortcomings of the current publishing industry. Desktop bookbinding devices are already available at a cost that places them beyond the domestic market, but the technology is not mature.

In general terms, early markets for the Bi Sheng might include the niches already identified by the other electronic books: professionals who need up-to-date documents, students who need the latest textbooks, and governments or large businesses with an internal publishing program already in place. There is also some possibility that the Bi Sheng might open up new book markets, perhaps among readers who have been frustrated with the limitations of conventional bound books in terms of content selection and electronic searching, or among people who would be originally drawn to try the Bi Sheng because of its novelty.

In addition, the Bi Sheng should also be marketed for students and professors as a replacement for course packs.

Copyright

Developers of the Rocket eBook, perhaps because they had spent considerable resources in securing the involvement of Barnes and Noble, were adamant in highlighting the importance of the active participation of the publishing industry in any successful electronic book design. Barnes and Noble provided the Rocket eBook with its list of proprietary titles.

The necessity for proprietary titles seems far from being obvious. Computer printers and photocopiers have been successful parts of the home and office for nearly twenty years without requiring the development and distribution of proprietary material that could only be printed or photocopied on compatible machines. In fact, it seems reasonable to assume that one of the sources of contemporary confusion in copyright law arises from the development of an ever-increasing array of reproduction methods.

Copyright issues will be resolved through the complicated and time-consuming processes of legislation and political decision-making at the national and international levels. The Bi Sheng would be another factor in those discussions, and the people responsible for its implementation would be morally bound to participate in the process to whatever extent seems reasonable.

Security

Electronic document security is an important issue in many applications involving either confidential material or financial data. One of the features of the SoftBook is that it includes a security system for documents stored on the reader. The Bi Sheng has no security system whatsoever, since the focus group participants and the survey respondents stressed repeatedly the importance, not of document security, but of being able to share and lend books.

Conclusions

The assumption of this thesis is that the design of an electronic book could be understood to exist between a pair of difference poles with the laptop computer on one side and the conventional bound book on the other. My intuition was that if the electronic book were to be positioned for the people who are currently frequent book readers, then it would need to be as close as possible to the conventional bound book, without simply attempting to reproduce in a new form the features that are already available. So it would also require additional features carried through from the other difference pole – the laptop computer.

In the course of two focus groups and a Web survey I was able to obtain a variety of information from frequent book readers, primarily in the cohort of women between the ages of 26 and 60 with at least one university degree, and many of whom are currently in graduate studies. The number of survey respondents, however, was not sufficient to be representative, although the results have nonetheless been treated as valuable insights into the thinking of at least some members of that demographic.

The Bi Sheng, along with its printer and software, is an attempt at the design of an electronic book for these people. It features pages made of electronic paper, which is read by reflected light and statically retains its image in the absence of electricity. It can be erased or overwritten, and the signatures detached from each other in the printer so that the book is disassembled for reuse. It can be searched and annotated using a digital stylus. It can in its deluxe form store more books than it currently displays. The cover and spine contain designs specific to each title in much the same way conventional bound books feature cover and spine designs. The titles are created by standard computer layout programs and printed to a format that the book can display. It can therefore display fonts and graphics in a manner similar to the conventional bound book. Its physical thickness represents the number of pages in the largest title currently stored, and readers can mark their spot with a slip of paper, or can judge proportion remaining against total length at a glance or touch.

The digital or electronic paper that makes the Bi Sheng possible does not exist in a commercial form at this time, although there are at least four research companies working on tantalizing prototypes.

Recommendations

The Web survey and focus group generated additional data concerning their cohort that was not available to the designer prior to the study; these methods can therefore be said to have the potential to make a valuable contribution to a given project.

In cases where familiarity with the Web does not skew the sample, I would recommend a Web survey over a paper-based survey, for the following reasons:

- Respondents to the Web survey were more loquacious than their counterparts on paper.
- The results were straightforward to manipulate, since they were already collected in a database program with a variety of sorting and calculation functions.

A mechanism should be found for Web survey transmission whereby data entered in the individual fields can still be sent by E-mail if the server database crashes.

Obtaining a satisfactory study sample is time consuming and difficult. Sufficient financial resources and time should be allocated whenever study participants are required. Then the finances and time should be doubled.

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Stan Ruecker

**The Bi Sheng 畢昇
Electronic Book**

More like a book, less like a computer

Appendix A: Detailed survey results

Procedural decisions

Where people provided ranges, I took the average of the numbers.

Where people left blanks, I didn't assume those to be zeroes, but N/As.

In questions related to children, I took zeroes to be N/As.

Total numbers

58 total respondents

7 were from focus groups, that is, written on paper

8 others were also transcribed from paper

Book buying per year

Books for self: 2622 books for 57 respondents = 46.00 books ave.

Subtracting the three highest answers

(600, 300, and 200 – the rest were 120 or fewer):

1522 books for 54 respondents = 28.18 books ave.

Books for children: 244 books for 13 respondents = 18.85 books ave.

Books given as gifts: 449 for 53 respondents = 8.47 books ave.

Books received as gifts: 248.5 for 47 respondents = 5.28 books ave.

Books read per month

324.5 for 58 respondents = 5.59 ave.

Hours reading each week

Books to self: 739.5 hours for 58 respondents = 12.75 hours/week ave.

Books to children: 30.5 hours for 8 respondents = 3.81 hours/week ave.

From a monitor: 964 hours for 58 respondents = 16.62 hours/week ave.

Calculating average reading speed

If we start with two of our averages – the number of hours spent reading every week and the number of books read per month – we can calculate the average reading speed for our sample, as follows:

$12.75 \text{ hrs/wk} \times 4 \text{ wks/month} = 51 \text{ hrs/month}$ spent reading books. Assuming an average book has 250 pages, then $5.59 \text{ books/month} = 1397.5 \text{ pp/month}$. 1397.5 pp/month divided by 51 hrs/month reading = 27.40 pp/hr average reading speed.

N.B. This average presupposes that reading times reported were for reading entire books, and did not include time spent consulting reference books.

Calculating average book length

Alternatively, if we posit 50 pp/hr and 12.75 hrs/wk . That's 637.5 pp/wk or 2550 pp/month . $2550 \text{ pp/month} / 5.59 \text{ bks/month} = 456 \text{ pp/book}$

Since 456 pp is pretty long for an average book length, either:

- a) people are reading slower than 50 pp/hr (half that?), or

- b) they are reading more books than they think they are, or
- c) they included non-book reading time in the total, or
- d) they over-estimated the number of hours by a significant amount (double?)

Reference book consulting per week

872.5 for 56 respondents = 15.58 consultations/week

Book borrowing per month

Books for self: 371.5 books for 54 respondents (9 zeroes) = 6.87 books ave., or

Books for self: 371.5 books for 45 respondents (no zeroes) = 8.25 books ave.

Books for children: 76.5 books for 4 respondents = 19.12 books ave.

eBooks

14 had heard of one of the 3 eBooks listed

0 owned one of them

1 owned a Quickverse Bible

2 had heard of a reader called the "onlook dictionary"

1 owned a Palm Pilot

Demographics

Age

< 20	0
20-25	9
26-30	10
31-40	15
41-50	15
51-60	4
> 60	4
N/A	1
total	58

Income

< \$15,000	20
\$15,000-25,000	8
\$25,001-35,000	6
\$35,001-45,000	7
> \$45,000	15
N/A	2
total	58

Children

1-5 yrs old	4
6-11 yrs old	5
12-17 yrs old	5
> 17 yrs old	12
N/A	37
total	63

Gender

female	37
male	19
N/A	2
total	58

Highest Degree Completed

Bachelor	24
Master	19
Ph.D.	12
N/A	3
total	58

Degrees Ongoing

Bachelor	0
Master	18
Ph.D.	10
N/A	30
total	58

Home Library

< 200 books	13
201-1000 books	29
1001-3000 books	13
> 3000 books	1
N/A	2
total	58

Work Library

< 200 books	27
201-1000 books	10
1001-3000 books	4
> 3000 books	1
N/A	16
total	58

Home Library in Childhood

< 200 books	14
201-1000 books	27
1001-3000 books	11
> 3000 books	4
N/A	2
total	58

Public Library Visits**Duration**

< 15 mins	5
15-45 mins	21
1-2 hrs	11
> 2 hrs	2
subtotal	39
N/A	19
total	58

per month

1-3 times	27
4-7 times	5
8-10 times	4
> 10 times	0
subtotal	36
N/A	22
total	58

University Library Visits**Duration**

< 15 mins	1
15-45 mins	12
1-2 hrs	25
> 2 hrs	9
subtotal	47
N/A	11
total	58

per month

1-3 times	16
4-7 times	12
8-10 times	7
> 10 times	12
subtotal	47
N/A	11
total	58

Reading**Read to as a child**

more or less daily	24
at least once a week	12
at least monthly	2
on special occasions only	1
seldom or never	9
don't remember	10
total	58

Media preference

see the movie	9
visit the Web site	3
read the book	41
N/A	5
total	58

Reading environment prefs

in a quiet room	34
with background music	21
with the TV on	1
N/A	2
total	58

Reading books enjoyment

1	0
2	0
3	1
4	11
5	43
N/A	3
total	58

Reading monitor enjoyment

1	14
2	18
3	16
4	4
5	1
N/A	5
total	58

Book reading divisions	raw total	div by 58
leisure reading (pleasure)	2547	44
required reading (work or school)	3253	56
total	5800	100%
books purchased	3729	64
books borrowed	2071	36
total	5800	100%
time spent reading books	3513	61
time reading magazines, newspapers, other	2287	39
total	5800	100%
fiction (books)	2633	45
nonfiction (books)	3167	55
total	5800	100%
paperbacks	3335	58
hard covers	2465	43
total	5800	100%
leisure library use (pleasure)	1622	30
required library use (work or school)	3778	70
total	5400	100%
in English	5168	94
in a language other than English	332	6
total	5500	100%

Reading locations	raw total	div by 58
home	3839	66
office	1178	20
library	349	6
other	434	7
total	5800	100%

Reading positions	raw total	div by 58
sitting	4031	70
standing	113	2
lying down	1541	27
other	115	2
total	5800	100%

Reading times	raw total	div by 57.78
morning	1113	19
afternoon	1406	24
evening	2758	48
after midnight	501	9
total	5778	100%

Reading times

4 respondents did not provide numbers totalling 100%: two of them used 33% and two of them had totals of 90%. The divisor has been adjusted accordingly to result in an aggregate response totalling 100%.

Other reading positions

Three respondents chose to specify other positions in which they habitually read books, as follows:

- slouched, sprawled, leaning, or in a bathtub
- stairmaster
- bed

Other reading locations

There were 24 respondents who specified reading locations other than their home, office, or a library, which have been categorized as related to the following locations: school, commercial locations, travel, and other:

School

- school
- grad study carrels

Commercial locations

- coffee shops
- cafe
- book stores
- public transit/coffee shop

Travel

- commuting
- bus, LRT
- trains, cars, etc.
- travelling

Other

- health club/exercising
- note: office is at home
- this year: on leave
- outside (park or lawn)
- bathroom

Average word count from paper-based survey

291 words for 9 text-based questions from 6 respondents

$291 \text{ words} / 6 \text{ respondents} = 48.50 \text{ ave. words total per respondent}$

$48.50 \text{ words} / 9 \text{ questions} = 5.38 \text{ ave. words per question per respondent}$

Average word count from Web-based survey

7644 words for 10 text-based questions from 43 respondents

$7644 \text{ words} / 43 \text{ respondents} = 177.76 \text{ ave. words total per respondent}$

$177.76 \text{ words} / 10 \text{ questions} = 17.77 \text{ ave. words per question per respondent}$

Appendix B: Focus group transcripts

Focus group one

This group included four participants (v1 to v4) and the moderator (m). The participants were all women who at the time of the session were graduate English students at the University of Alberta. One of them was also working as an editor on the Canadian encyclopedia project, which has a major computing component and is published on both paper and CD-ROM. Two of the participants had also taken a graduate English course together in hypertext, delivered by professor David Miall at the U of A.

The first part of the transcription deals with comments made by the participants while filling out the survey. They are included for the light they cast on the design of the survey, and as part of the record of the tone set by the group. The opening statement was not recorded on tape, but was read verbatim from the printed version (see Appendix C: Ethics Review Forms – Statement of Purpose).

Start Transcription

m: This mike is – I sort of tested it, and as long as you speak clearly. It's supposed to pick up for you know, ten feet in area or whatever.

v1: These are hard.

v2: Yeah. I'm still stuck on question number one.

v3: I can answer 2b²⁰ right away.

m: Feel free to jump around a little bit, you know. Some of these are going to be a little more straightforward than the other ones. I'll get myself a cup of coffee, too.

v4: We're going to have recordings of me crunching a peanut butter cookie.

v3: They're really good cookies, though.

v4: I suppose I'm not allowed to ask you how often I do this, ***?

m: How often do you do what?

v4: Consult a reference book.

m: Oh, Jeez.

v1: Books – sorry, go ahead.

v4: How specific do we have to be? Can we say it is greater than twenty but less than thirty?

m: Sure.

v1: And books aren't articles.

m: No that would be more like reference books you consult.

v1: So you're talking like, fiction. Novels.

m: Well, or like a non-fiction treatise that you might read from cover to cover.

v1: Okay.

m: This coffee's pretty bad. I think it could use maybe a little more water.

v4: Hey, hey, hey. Don't you touch that.

²⁰ How much time in a typical week do you spend reading books to your children (please indicate hrs or mins)?

Everyone laughs.

v2: Do not take away coffee.

v1: Number five²¹. Should we be honest?

Everyone chuckles.

v4: These are tough.

v3: Yeah. I wonder if my job is going to skew it. Should I separate?

m: I would think not, because—

v3: More and more people are doing that kind of work.

m: Yeah. The thing that I'm trying to design, if you would use it for your work, or your leisure, it's—

v3: Yeah.

m: I would say lump it all together. I mean, I think ideally I would do this same kind of thing with professional — I mean like English professors or something. A group that uses books professionally, too. Librarians.

v3: Uh huh.

v2: Math. Oh God.

m: Oh. Sorry about that. Yeah. I hadn't thought. I should've provided people with calculators. I don't know. Might be insulting.

v2: I might be grateful. It's always when you get into hours and minutes, too, because everything is in sixties, so—

v1: Body positions.

m: I had a lot more variety under that question, but my adviser said: "You've got to take some of those out. It starts to get ridiculous. So just put in an 'other.'" Things like you know, you're sitting on a bus, or you're standing on a —. "I read while using a stairmaster."

v1: Oh yeah. I forgot. I do that all the time.

m: It's one of the guys. He said, yeah. I talked to Stanley Varnhagen, who does the surveys on campus, and he helped me go through this.

v2: I'm always surprised when I go to the gym and I see people reading schoolwork while they're exercising. I don't know how they take anything in.

m: Just hoping repeated exposure, maybe.

v2: Yeah.

v4: Dammit.

Pages turning.

m: Oh, I suppose the other thing I should add is that your filling out this survey is to some extent a pre-test of this as a survey. You know — I get a small group to do it and then give me some feedback, and then go live. Ideally, for any written survey what Stanley tells me is that you need about four hundred respondents. And if you can get that many inside your demographic, you know, all mapped out correctly, you're done. You know, there's no point in getting two thousand, because four hundred will get you the same result. That's kind of the break-even point for a survey.

²¹ If you had your choice, would you most prefer to see the movie, visit the web site, or read the book?

v3: That is really weird. You'd think that's not a very large sampling if you're looking at a—

m: But you're within, I think it was three or five percent error. Is what they predict on that number. So I'll hope to get, you know, a few dozen maybe.

Paper shuffling. Erasing.

v4: You can tell grad students don't do written tests anymore.

Chuckling.

v2: When you ask public library, that does not include the university library?

m: Yeah.

v2: Okay.

v1: Do you want us to answer these book skills – oh, these are the focus group—

m: Yeah. Those are the focus group questions. So that's what we're going to be talking about. I think in the electronic version I changed it to say "a university library" or "a public library" rather than assuming there was only one of each. Yeah. I didn't change it on this printed one.

v1: Now I have to run to the bathroom.

m: Sure. You know where they are.

v2: That's on tape, now, you know.

General laughter.

v1: I have to pee. Oh, where is it?

m: Down there to your right.

v3: I've never had to divide it up before like this.

v2: This is really interesting.

v3: Yeah, it is.

v4: To compare the number of books I have to the number of books my parents have – I consider them the readers. But owning books wasn't something they did. If you were going to buy a book it'd be something like the Bible.

m: Yeah, which is interesting. Because the assumption I made when I originally designed this study was that you would own books if you were a heavy book user. Where for them it would have been just the opposite. Or I mean, that wouldn't have been a factor. My parents didn't own any books, but they didn't read any books.

v2: My mother just asked me this for tax purposes. "How many books do you buy every year?" I don't know.

Laughter.

v3: Too many.

m: Don't ask.

v3: Leisure library use. I can't remember the last time I signed out a book from the library just for fun.

m: Isn't that interesting.

v4: And as an undergrad I would do that all the time. It's like getting let loose in the candy store.

v3: Usually I end up getting books at Christmas, my birthday. I just write up what I want and then everybody knows to get me that.

v4: Right on.

v3: I don't spend the money – I don't have to go and shop. And I have all the books I want to read.

m: I don't have that as a question do I?

v3: No.

m: "How many books do you receive as gifts?"

v3: That's the best way to get books. Especially if you ask them for a gift, they get you a hard cover.

v2: Yeah. Every year at Christmas I get a good, big stack from my mom.

v4: Especially if it's something like a reference book, where you don't necessarily have, you know, a hundred and fifty dollars to put into *Bartlett's Familiar Quotations*.

General agreement.

v2: Yeah.

v4: Let alone an *OED*.

m: I didn't even bring any paper to make notes on. How's that for prepared?

v2: You want some?

Laughter.

m: Yeah, if I could get a sheet or two.

v2: Sure.

m: Thanks. I remembered to buy cookies.

v3: This is funny, though. I go to the public library a lot. But I go there to do research for my job.

m: Well, that would count. But what are my categories?

v3: You put: "How often do you go to the public library as a patron?"

m: You don't work at the public library, I guess, is what I was worried about.

v3: Oh, I see.

m: I might get people who are, you know, paid to be there.

v3: I just feel like I'm getting gypped: I go to the library all the time, but I never get a book for myself.

Laughter.

m: So, strictly reference. You're getting stuff for the encyclopedia.

v4: I'm going to tell my son that I met someone from the *Canadian Encyclopedia*, and he's going to be thrilled. He thinks encyclopedias are written by gods.

Laughter.

v3: Oh, well.

v4: He'll quote his little children's encyclopedia to me.

v3: There's a student version of the *Canadian Encyclopedia*, on CD-ROM. That's what you really need. It's got games. The Canucklehead Quiz.

v4: Canucklehead?

v3: Yeah. It's really cute.

v4: He set me straight on moths and butterflies.

v3: Oh, what's the difference? The antennas and the wings?

v4: The antennas, and the butterfly does not spin a cocoon. Only moths spin cocoons.

v3: Oh, I didn't know that.

v4: Butterflies form a chrysalis–

v3: Oh, that's right. That's the hard stuff.

v4: The outer layer of their body becomes a shell.

v2: Oh, really?

v3: They sit with their wings open–

m: There's something about cooling, too, wasn't there?

v4: Yeah. They flap their wings for cooling.

m: When butterflies are sitting there, opening and closing their wings, that's how they're adjusting their body temperature.

v2: With their wings, really?

m: You'll see them sitting there on a log, right, and they've got their wings up and then they open them. That's–

v2: Butterflies.

m: Yeah. Adjusting their temperature.

v2: Wow, I didn't know that.

m: No, me neither.

v4: I thought they were just showing off.

m: Your son was just showing off.

v4: Like some coffee, ***?

v1: No, thanks.

m: So did I get everybody's – well, I guess I'll get both. The consent form and the surveys. Or maybe hang on to the survey for now so you can read the questions as we go along.

v3: Oh, my goodness.

m: Have them in front of you. Oh, we've got to wait a second here.

v4: This looks so official. University logo on it.

m: University crest.

v1: ***, I was thinking that we have to play together.

v4: We do. I don't have a piano, but I've got a little–

v1: Couldn't we get a practise room here somewhere?

v4: I don't see why not. I should go to the music office and see if I can book one.

v1: I should get my cello fixed, first, but–

v4: When did it break?

v1: It cracked. It's not serious.

v4: It's not serious?

v1: It's along the seam. It's okay.

v4: Good.

v2: Can you just define for me one more time "electronic book" so that I'm clear on the differences between printed and electronic. Is electronic just on-line? A book on-line.

m: Um, yeah, that's one definition, but what I'm talking about are physical readers, like the Rocketbook and the EveryBook and the SoftBook.

v2: I'm not familiar with—

m: They're almost like little laptops, or like Newtons, about that size I think.

v2: Okay.

m: They weigh a couple of pounds, and they have a little digital screen. They just came out last summer. There was a whole swarm of them came out all at once.

v3: I've been hidden behind my books — I didn't hear about them.

v2: Wow. I didn't either. Are they — do you buy like disks of books that you load into them?

m: Each one has a different method. One of the companies, you buy them off their Web site, your book won't output them — you can't save them to your computer or to a printer. So you can have them in your book up to I think ten titles.

v3: Right.

m: And you read them — you have a little flipper that flips the pages and it virtually flips them. And then, uh, if you want new ones you put the ones that you've already purchased back up onto their Web site.

v3: Um.

m: And they have a bookshelf with your name on it. And you buy some others. So it's all very proprietary.

v3: Oh, okay.

m: And I forget which one that is. And then the other model uses anything coded in HTML. So if it exists as a Web document then you can load it into the reader.

v3: Right.

v1: So, how much would one of these devices cost? Like to buy the Rocketbook or whatever.

m: They're a few hundred dollars.

v1: Then once you have it you, I mean, if you're getting it off a Web site then are they free?

m: Those ones are free, yeah. The proprietary ones you have to pay. And they're about equivalent to a normal — they're a little bit less. They'd be like four or five dollars, instead of six or seven.

v1: Do you have one?

m: No. I was thinking about getting in touch with the people and seeing if they'd like lend me a couple or something.

v1: Yeah.

m: One from each company or whatever. So I'll see. My show is in the end of August. So if I can get some by then, maybe. Put the existing ones on display.

v2: So you're interested in designing a different kind of electronic book? Or a different kind of—

m: Different kind of reader. Like it's the physical reading device I'm interested in. Rather than the characteristics of the — how the layout is done or whatever.

v2: Okay.

v4: The reviews on these things have been really negative so far. This is not a book. This is not a book. I don't know how they're selling, either. Do you know?

m: No. No I haven't — how they're selling. I should have this somewhere, hey? There was an earlier version: Sony came out with an electronic book in the — it was '91 or '92. Called the Bookman. It was a little — it was about the size of a walkie-talkie kind of thing and it had a four inch screen that showed maybe four lines of text at once.

v2: Oh, how annoying.

m: And you could sit and flip through. Yeah. So they went nowhere. And it took six or seven years before anyone came up with an alternative. And now, this year there's a bunch of excitement, there's like an electronic — IEEE has an annual virtual reality conference, and one of the workshops is on design of electronic books. In May. So, I think it's something that's going to turn up more into the turn of the century.

v4: But only computer techs are interested.

m: Yeah, it's something that they haven't tended to do from a design perspective or a reader's perspective.

v4: Computer techs don't read.

m: Yeah.

General agreement.

m: And they are not people who are naturally inclined to go and ask someone who reads a lot — “well, what do you do? What do you like about books?” That kind of thing. So that's why I thought some of this information might be stuff that they would never collect.

v3: It's funny — the guy I talked to this morning that I told you about, said books are going the way of the dodo. Just like George Landow.

m: Sure.

v3: He says he owns two books. That's all.

Snorts of disgust.

v2: Right. I'm skeptical.

v3: But he also told me he's a librarian, so—

m: I have a collection of essays by librarians from the early fifties — fifty-two, fifty-three — called *The Future of the Book*. And they're talking about how everybody's saying that the book is dead. And they're talking about microfiche.

General surprise.

v3: What a horrible way to read.

m: So yeah. You know. This isn't a — the book hasn't been outdated recently. It's been outdated since the fifties.

v2: Yeah. I mean, isn't that just part of our apocalyptic culture, though?

General agreement.

m: I think. You say oh, it's going to supersede—

v2: Yeah.

m: Well, things don't – they get carried forward in some form, usually. We have carry-overs still from fads that happened back in whenever – the Renaissance.

v2: Right. It's also a strategic marketing move, I think.

v3: Can you imagine curling up on a cozy evening before the fireplace with your microfiche machine?

v2: Oh, yeah. That's what I want to do on Saturday nights.

General laughter.

v2: No kidding.

m: Or yeah, or now your monitor. You know, people–

v4: Like Michael Twyman was saying about statistics in the UK, is that what's been happening in the UK is that people are buying more books.

General agreement.

v4: The market for books is actually increasing.

v1: Yeah, I mean – Chapters. Like it's huge.

v4: And it's not the only chain.

v1: Yeah.

v4: It's as though the big fuss about the death of the book has gotten a lot of people interested in books.

v1: Yeah.

v3: Remember David cited that article about um – a newspaper article appearing – I guess it was the *Journal* or the *Globe and Mail* or something. They said when they put books up on the Web, people went out and bought the book. Because they don't want to read it on their monitor, but they got interested in it because of seeing it on the monitor.

v1: And that Amazon – that Web site is very popular, too. Like, you order books on the Web. You don't read them on the Web, you order them.

v3: You just order them.

m: Okay, well, can we start with some of these questions, then? So, "what leads you to read a book?" I guess, is the first question.

v3: Work.

v2: It's on the syllabus.

m: School is like the main thing.

v1: Summers are different, though.

m: Okay, so what makes a good summer book, versus a–

v1: I usually read books because of word of mouth, and for pleasure. But it's generally required. And now that I'm in graduate school, summers will probably be devoted to preparatory reading anyways.

v2: I seem to get about two or three pleasure books read per year, usually around Christmas time.

v3: [agreement]

v2: And then the rest of the time is always spent in work. And I always – yeah, it's always word of mouth or else they're given to me as gifts. I don't – I usually don't, and if I buy a book I buy it because I like the cover now.

Laughter.

v2: Jeez, it's really embarrassing, but...

v3: I read book reviews, too, just to know what's out there, what's been written now.

v2: Yeah.

v3: If it sounds appealing, if it's by an author I like, I usually will go and read the book jacket, and if it sounds good, I'll buy the book, or ask for it for Christmas most often.

v2: Yeah.

m: So, what do you read on the jacket?

v3: Just whatever it says about the book.

m: Yeah, the reviews and stuff, too?

v3: Yeah, yeah. I don't generally let other people's opinions make my decision for me, but if it sounds like a story that I'll like, or it's, you know, an era that I'm interested in. If there's just something appealing about it.

v2: I usually don't read the – I mean, like I'll read the jacket, but, if I get it as a gift or whatever then I won't. I usually – usually reading the spine information makes me less interested.

v4: I've been burnt so many times. Whoever wrote the blurb never read the book.

v2: It's never right.

Laughter. Agreement.

v4: And I'll – I'm likelier to read a book if it's won the Booker prize or the Giller prize. If it's up for the Booker prize.

m: Is that right? The prize has meaning?

v4: Because I feel like, you know, this is what's happening right now in literature. I should know something about that.

v3: Yeah, exactly – what you read about it somewhere.

v2: Oh – I sometimes get, um, I don't know: intimidated by that. Like sometimes I go it'll be too – I won't understand it if it won the Booker prize.

Laughter.

v2: I better just go and you know, read something a little more lowbrow or something. I just read *Fall on your Knees*, um, because – mostly because I had about fifteen people recommend it to me. And I'm still recovering. It was the best book I've ever read.

v1: That's next on my list.

v2: It's amazing.

m: So, you said sometimes a book cover appeals to you. What do you like in a book cover?

v2: I like these new wave ones that they're doing. Um, it's not like – it's all one texture – you don't have different textures on it, but they've got, um, oh. Do you know the cover of like Jane Urquhart's *The Underpainter*?

v3: Um, yeah.

v2: They've got those sort of abstract designs and colours and um, it's not really – like if you contrast that to say Gail Anderson-Dargatz's *A Recipe for Bees*, it just – that

doesn't appeal to me at all (see Figure 19). I'm trying to think of other covers that I like. *The Reconstruction*. Claudia Casper's *The Reconstruction*.

v4: What did you think of the cover to *English Patient* when it came out in paperback? I kind of thought that sucked.

v2: Yeah, the way he's sort of climbing? I didn't – I don't get that.

v4: The only thing I liked about that was that they issued it in two colours – that was cool. You could like choose which colour you wanted. Do I want the blue *English Patient*, or the copper coloured *English Patient*? (see Figure 20)

v2: Yeah, it's kind of like, I mean it's sort of – it feels more abstract: the colour scheme. And the designs are less, like [drums fingers] maybe there's more of a surreal quality to them?

v1: Less Oxford Classic-ish.

General agreement.

v2: Yeah – that's for sure.

v4: With the picture of "great art" on the cover.

Agreement and laughter.

v2: I will like this because -

v1: I think books are getting prettier, though, eh? Book covers in general.

v2: And aren't those great – the leafs? Um-

v4: Oh, yeah!

Laughter.

v2: I don't know how to describe it-

v4: It's like a fake dust jacket.

v2: That's what I like. I like the fake – yeah, that's it.

v4: Yeah. I like a paperback that's like a – it's like an art object.

v2: [agreement]

v4: I would buy the hardcover if I had the money. But now, you're getting paperbacks that are really nicer than the hardcovers, because the hardcovers have like a really cheesy dust cover and behind the dust cover they – you know, it looks about like a running shoe.

v1: How they feel is important, too, eh? I think.

Agreement.

v2: They've got that soft sort of -

v1: Yeah.

v2: Paperback thing.

v1: Yeah.

v2: And then, some of the thicker pages.

v1: [agreement]. I love the thick pages. Thick pages are good.

Laughter.

v4: That's something I have against Oxford – the Oxford author's series – is you can see the type through the pages. There's a lot of strikethrough. It's like I'm reading this sort of grey page.

Figure 19: The front cover of
Gale Anderson-Dargatz's
The Recipe for Bees

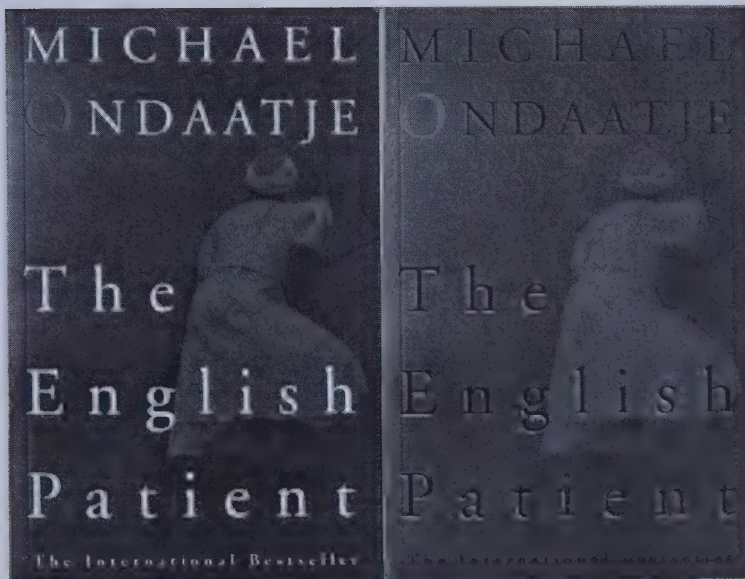
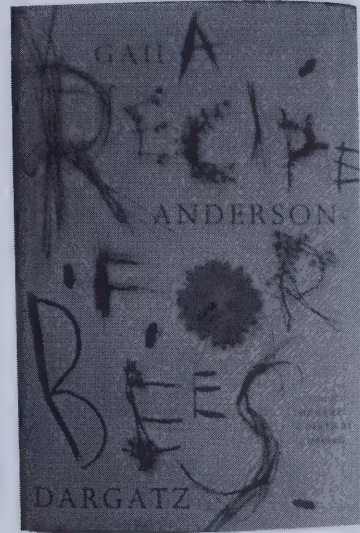


Figure 20: Alternate trade paper covers for Michael Ondaatje's
The English Patient

v2: That's annoying.

v4: You know, if you're in bright – bright sunlight, it's just impossible.

v3: If your eyes are tired from all that reading.

v1: It's just that they are cheap, and they have good annotations.

v4: Yeah.

Laughter.

v4: Good apparatus. I will buy a book – I will actually buy a second copy of a book if it has good apparatus. Like if it's got a new introduction by like, Judith Butler, I'll probably put out the bucks for a new copy.

m: So, what's included in the idea of apparatus?

v4: Uh, an introduction that doesn't just say: "This is an enduring work of art that we should all adore and love," you know – a scholarly introduction. Good text. And lots of footnotes.

v3: [chuckles]

v2: Yeah, I mean the bibliography is where I turn first.

v4: Yeah.

v2: Now, because–

v4: The other thing is a chronology, especially for women writers. If you don't get a chronology sometimes it's very hard to figure out you know where did they fit in.

m: Chronology, of like, their life? Their works?

v4: Their life and writing, yeah.

m: Huh. Indexes?

Agreement.

v2: Oh yeah. Yeah. Definitely.

m: What about tables of contents?

v2: Oh, yeah, I always look at those. I don't always find them useful, but I always look at them. For non-fiction.

v4: Yeah, that's true. For non-fiction I'll check the – I'll check the chapter headings. Just, like if I'm sort of on the knife edge as to, you know, does this person really have anything I want to hear about. George Landow. His chapter headings definitely told the tale (see Figure 21).

Laughter.

v4: Bozo.

Laughter.

m: Okay, yeah. "What's the difference between the experience of reading a book and the experience of dealing with other sources of information?" What is it in your mind that makes a book a unique object? If it is unique.

v2: It requires energy.

v3: Yeah. It's the engagement with the text. And the aesthetic appeal and everything. Yeah. I don't know – when I sit in front of the T.V. and I just zone out.

v2: Yeah.

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Figure 21: Chapter headings for George Landow's *Hyperfiction*

v3: It's like brain candy. It'll lull me to sleep or something before bed. I don't get really a lot of information from anything I look at there. Unless it's a documentary or something. Then I take a little longer before I zone out.

m: But even then – do you learn things from documentaries?

v3: Not a heck of a lot. I find – some of that must be physiological responses, though, because when you sit in front of a screen, your blink rate drops and you go into almost a catatonic state.

m: Oh, is that right?

v3: Yeah. That's why your eyes hurt when you're wearing contacts.

v4: That's right.

v3: And you're looking at a monitor all the time. That's because your blink rate drops and your eyes dry out. It's really uncomfortable.

v4: After doing Web work, my eyes are really red.

v3: Is that right? Yeah. But reading a book – it engages your brain. You aren't being fed something. You can be involved in what you're doing.

v1: Less brainwashing involved.

m: Is that right? How does that work?

v1: Well, I think it's more solitary. And I think – well, for me at least there's more of an opportunity for interpretation than there is when you go to a movie theatre.

v2: I think it's – I think I find it the opposite. I have to sit and think harder about how I'm being interpolated when I'm reading a book. Because when – I don't know – visually it seems so obvious when I go to a movie it's – clearly this is what they're doing. But a book, well, the logic seems a lot more intricate.

v1: That's what I mean, though. That's exactly what I mean. You're not being fed this one picture, so it's – like for example, when you go to a movie and it's based on a book, you're given one story, you know? Which is – leads to the whole issue of what you just said. I can't remember. I just lost my thought.

Laughter.

v3: About it engaging people?

v1: Yeah. Yeah.

v3: One thing I don't like about movies – especially movies made about books, is that you don't – you can't interpret it yourself, the way you can with a book.

v4: And where are your tools for doing that? You don't have – unless you've got a background in directing and editing and lighting and photography and history of film, you're just kind of there on the table, and they're doing the movie to you. Where if I'm reading a book – if I'm reading Sarah Fielding, well I've got a library of my own, it's like okay, I've got Henry Fielding and I've got other members of the Fielding circle and I've got my OED if I don't understand one of the words, and I feel like I am bringing something to bear on it. Or if it's a secondary reading, that you know, this is a tool that I am going to use. I am the tool user, I am not the–

v3: Not the passive recipient.

v2: I don't feel that way about movies. I've been doing a little bit of reading into film stuff, and I've been watching a lot of Hitchcock lately and reading about Sutchter, and so I can sort of go: "Oh, right there, that's where he's doing it. That's the shot-reverse-shot formation, right there."

v3: Is it the tools, you know, that *** was talking about.

v4: I really do think that sometimes you're supposed – that, that the filmmaker's trying to put it over on you. Like, *Lethal Weapon 4*, is just to me an egregious film, because of a series of Australian traffic advertisements – for traffic safety – where they went to a lot of trouble to do a huge marketing study on how to get at the consciousnesses of people about traffic accidents, and they came out with these really, really high impact, graphic, violent commercials. And you know, halved the accident rate. And those commercials were being reproduced, shot by shot, by *Lethal Weapon 4*, as part of an action movie. I was just like – you filthy bastards. You – you don't want me to know that that's part of something that was for the, you know, the health of the community. You want to somehow, you know, slide that under the door as something you came up with for entertainment. It's just like plagiarism. And to me, that was, that was, that was actionable plagiarism. That wasn't honest. That wasn't them drawing on something they thought I would know – that was them trying to put something over on me that they hoped I wouldn't connect.

m: Surely that happens in fiction, writing though, too? Don't novelists do that same kind of slight of hand sometimes?

v3: We're supposed to be aware of that though – English students.

v4: It's supposed to enrich it. We don't feel ripped off it's by someone who already–

v3: To another text. Actually it's sort of like getting a book gift inside your text – “oh, I recognize this from something else, isn't that wonderful. They drew on something I'm familiar with.”

v4: Maybe that's just my moral stance on–

Laughter

m: Did anyone else have that same reaction? Did you see *Lethal Weapon 4*?

v1: I haven't seen it.

m: Yeah, I don't know about that. So what would be the difference then?

v4: Helplessness. It just seemed to me they were counting on helplessness.

m: Hmm. As opposed to–

v4: It's like I was willing to watch those Australian commercials because I felt there was a purpose there that was a potential benefit to me and my community. And then to have someone deliberately use that – I mean, those were designed to deliberately make someone feel helpless and afraid and shocked. And they were using that to make me feel helpless, afraid, and shocked as a form of entertainment. As though they were counting on my helplessness as a part of the movie experience.

v2: But don't you think that, I mean that that happens in fiction, too.

v4: I guess that's true. I certainly feel that way about reading Gilbert Sorrentino.

v2: Which I haven't read.

m: Pick something everybody knows. *The English Patient*.

v4: But that one I hated.

Laughter.

v3: But the book was better than the movie.

v2: Oh, the movie was terrible. God.

Laughter.

v1: Wasn't it?

m: Really? What was the – problem.

v2: It was just this – it was this obvious sentimentality.

v1: Where a beautiful woman rots in a cave for three days and still looks beautiful at the end.

v2: I mean, I, I mean like the orchestra comes on at the precise moment when everyone starts sobbing, and it's just, it was just so, so obvious.

v3: Overtly manipulative. I hate movies like that.

General agreement.

v2: I didn't think it was clever – I thought it was quite predictable.

m: So, overt manipulation is one of the differences between the media?

v3: I just find I don't like that in movies.

m: Or what you can expect.

v3: Yeah. *Benji*. I hated that movie. It made me cry.

Laughter.

v2: Like *ET* or something. I mean, if it's self-conscious about how it's doing it, but if it's serious about it then, no way. I don't know, I think this may be where some of my book snobbery comes in, because I think authors are a bit more self-conscious about the ways in which they're doing that.

m: Than, directors? Or screenwriters.

v2: Well, a certain, a certain camp of – I guess I'm talking about Hollywood films. There are exceptions to it. But you know, the independents I wouldn't put in that category, so–

v1: And generally, wouldn't it be true that movie directors are driven largely by money? And I'd say that a lot of writers wouldn't be, so much.

v4: I wonder, because I'm thinking of how I've seen a number of movies like *The Professional*, where I really think the director didn't know what he was up to. Like, *The Professional* to me is clearly an attempt to tread as closely on the boundaries of what can be represented about the sexuality of girls – of girls, as children, as possible.

v1: But when we're talking Hollywood–

v4: And he's, he's–

m: It's a Hollywood movie, isn't it–

v1: I'm sorry.

v4: He's at the artsier end of things.

m: It's an action movie.

v4: And I, I really felt like he, he has not thought responsibly about what he was depicting in that film. You know, to dress an eleven-year-old girl up like Marilyn Monroe in *Seven Year Itch*. That is not a cute scene for me. To have, you know, a, a man alone in the room with her performing Marilyn Monroe for him, I thought was like really serious, and he just sort of tossed it off as an ornament to the film. Even people I consider bad fiction writers, authors like Robert Heinlein, he seems to at least be aware of what he's attempting. I mean, he also expresses in his later books things I find very distasteful, but he at least seems aware that he presents them as ideas, instead of just as, sort of, experiences. And to me that's just the difference between the visual and the textual. You get these photographer's movies. It's hard to have a photographer's book.

v2: That's interesting, though. I wonder if we could think of one.

m: Of a photographer's book?

v2: Yeah.

v4: That's what I didn't like about *English Patient*.

v2: Yeah.

v4: Vignette after vignette after vignette.

v2: Yeah, yeah.

v4: Going on, with no underlying idea.

m: Like why does she play hop scotch?

v4: Yeah.

m: That kind of question. It's like, huh?

v2: It's a nice scene.

m: Yeah. It's a good individual scene.

v2: I want to go back to what you just said about the difference between like, money and writers. Writers. I'm wondering if that's not a throwback to our sort of image of the poor artist.

Expressions of interest.

v2: Who's doing it for the principle of the thing, but not for the glory of it.

v4: [laughter]

v2: I don't know, I sort of go back to Virginia Woolf, a woman needs a room of her own and five hundred pounds a year if she's going to write anything. I don't think you can divorce economics from any artistic production. But I wonder. Still I wonder, because people make – there are more directors who are rich than there are writers.

v1: Yeah, and I mean I think Margaret Atwood and Stephen Spielberg are on different planes. Just considering their audiences, and the size of their audiences, and I think, I don't know, I guess, like I think a lot of movie directors are much more aware of what a popular audience is wanting. I don't know. I'm not sure about that, though. I'm not sure.

v2: On the whole I think you're probably right. I think a lot more people watch movies than read books.

v1: Yeah.

v4: Does Anne Rice make as much money as Stephen Spielberg? There's a woman who's got, for a writer, a very large market.

v2: She's probably making the most of any writer.

v3: Close, but probably nowhere near – some of the big sellers, especially down in the States. Danielle Steele must make a gazillion dollars.

v2: Yeah.

v3: On her books, and they're apparently all the same, the same kind of plot structure and so, I don't know talking about different types of literature. What we might consider high literature compared to low, pop culture.

m: So what about the informational end of it? Like we were talking about the fictional part. What about other sources of information? So I guess that would largely be you know, documentary television, PBS, the Internet explicitly.

v2: I don't have – I have a T.V. with a VCR but I don't have channels, so I can't watch anything but movies. I love movies, so that's the extent of my television experience.

m: So those aren't sources of information for you at all?

v2: No. When I sort of visit other people, then I'll sit down and watch the news, but that happens once in a blue moon.

m: What about documentary films, like they have – some of the film stores have them.

v2: I don't see them very often, but um, but I really like them. The last one I saw was – this is terrible – it's my area, too, and I – a famous African-American director.

Chorus: Spike Lee.

Laughter.

v2: I just, I recently watched a documentary he produced about the 1963 bombing of Sixteenth Street Baptist Church, that was, that was amazing, and I actually learned a lot from it. But I don't watch them often.

v3: We watch the news every night. It's a ritual. Watch the news, read the paper, and read the news magazines, and sort of compare the three versions of the stories that we get and try to decipher the facts.

v4: Hmmm. Wow.

v3: As they could be interpreted.

v4: So what do you find?

v3: The story is never the one that you're actually told. You know, there's always some – like, when Toronto calling out the army. For their, their big bunch of snow that they got, and we were all sitting out here laughing at them. The newscasts in Toronto were a lot different than the ones here. And what we saw in the paper was guys in uniform out shovelling snow. But they were calling them the army. Now the media gets the names wrong because they weren't army regulars – they were reserves. When the army showed up, they took a look around and said "we're not shovelling this stuff," got on the bus, went to the mall, then went back home to Petawawa. The reserves stayed there and shovelled the snow, but that's not the story you got in the press. You know, I heard about it from a fellow who lives in Toronto, and has connections in the mayor's office. So, yeah, well, the mayor panicked because he heard this forecast and "we're going to get lots of snow," and they didn't get it. But those are things you didn't see in any news report.

v4: So, so you deliberately sort of track the deployment of the story.

v3: Yeah, it's just sort of a – what a weird hobby, but I guess that's what it is.

Laughter.

v4: Cool.

m: It sounds like.

v2: But do you think we find that one medium is more, what you would think would be more accurate than another?

v3: The newspapers are usually a little more accurate, because they have more time to prepare their stories. In the evening we see Lloyd Robertson come on, with the eleven o'clock news. He's–

v1: You get glimpses of everything.

v3: You get little samples. And sometimes they literally bring something out of the camera and into the newsroom, and they don't really have time to edit and stuff. Yeah, there's a lot of bad reporting. And public attitude shifts towards – when Chretien went after that protester, and throttled him, I mean, as public responses to, to what happened were favourable to Chretien, the news reports started flipping over to that side, where at the beginning they called him a manhandler and a basher. Then they

changed to story to, you know, Chretien was under attack. So it was really interesting to watch that. I'm really skeptical about information I get from any source.

m: How about the – how about the Web?

v3: I use that a lot in my job. Um, same thing.

m: As a reliable source? Or as a–

v3: Uh, just as a source. I don't – I usually look on the URL, and look for edu.

v4: Yeah.

v3: You know, as an indicator that this is more reliable than other things you might see. Or things put out by institutes – like Vancouver aquarium, I was working on an article on killer whales. And the Web site set up by the scientist who was doing the article for me. But things like – anybody can post anything, so if it's just something that somebody put up there, I don't even look at them. I see a search and get a long list of these things.

m: So it's got a tilde and somebody's name.

v3: Yeah. I don't even bother to look at them.

v1: It's funny, though, how we're taught to be suspicious of the Web, and not of the news or newspapers, you know. Because most people don't track the different stories like you do, so.

v3: Yeah, you should.

v4: And yet, some ways that's easier on the Web. Like if I go to ABC news, and I get a headline, well then I can get the story, and I can track the story back in their archive, and then I can find out whose been reporting on it, and go and look up that reporter, find out what their background is. So there's a sense in which I have the option of getting a lot more background and things like that.

v2: There's a hierarchy in print news, too. Like, we're taught, in Alberta, well, we don't actually listen to what the *Sun* says.

v4: [agreement]

v2: And *The Herald* is only slightly better, but frankly it's about the same. *The Globe and Mail*, though, that's really where it's at, right? So–

v3: And the National Post is now trying to live up to that.

v4: [agreement]. Whereas for me *The Globe and Mail*, because it represents the interests of what is essentially another society, to me is really sort of like, you know, the NAZI newsmagazine *Signal*. You know.

v2: It's more the national newspaper.

v4: So I'm likelier to go to the Web. . .

Side One ends.

m: Where'd we get them?

v4: Motherly's.

v3: They're quite good.

m: I got those cookies with no GST. You get more than six cookies–

v2: Because you got six, so–

Laughter.

m: It's not a – how does that work? It's not a luxury?

v4: "You buy one bun, no GST. But one bun with butter GST."

v2: Brian Mulroney knows. Nobody understands the workings of the GST.

v4: Oh – about news on the Web. The other thing you can get off the Web that you can't get out of Canadian newspapers anywhere in the country is international news.

m: Hmm.

v4: If you want to find out what's happening in China, go to like, the Canadian-Chinese Association's Web site. You can do the same sort of tracking the deployment of something, because what China tells the world they're doing, is, is fiction. You know, it has nothing to do with what's actually going on in the country.

v3: Be interesting to study a history text from China.

v4: Yeah, you know I have some interest in the Asian politics, and whew, it's never in the paper. A third of the planet lives there. You just can't find out.

v2: It's very true. I'm thinking of *The Globe and Mail's* international section, and it always – always focussing on the Middle East. There might be a couple of smaller articles on, on you know, Asia somewhere. But there's not much.

v4: From what I've seen so much of Chinese politics depends on knowing the people involved. Like when Deng Xiao Ping came in power, that – the very fact he was chosen indicated a huge reversal of Maoism. But I didn't find that out until years later when I found out that the cultural revolution had been instigated mainly to put people like Ping out of power. It's like, Oh My God. And now that there's another leader, what does it all mean? There's no – no backstory on any of that. You get a little two-inch column that says, well, they jailed another member of the Chinese democratic union.

v2: Hmm.

m: Our next question – uh, oh. Affect. "What do you like about books?" So I guess we've been talking a little bit about that.

v4: They smell good. I walk in the library, and it's just like Christmas dinner.

[sounds of inhaling. laughter.]

v2: Oh, I hate the smell of the library.

v3: Yeah. In the older sections. Where they're really dusty–

v2: Oh, yeah.

v3: Oh, I hate going in those stacks. It's so creepy.

v4: You hear the silverfish going . . . [scurrying noise]

Laughter.

v2: [distaste] I hate those.

v3: There's nothing like a new book, though.

[Agreement]

v3: The crisp feel. Of course, old books that you've read a lot are comfortable, too.

v4: Bruce Peel is the best, though.

[Agreement]

v3: Yes.

v4: For one thing, I know there's no silverfish there.

[Agreement]

v4: And the other is that the books are just nice to handle. I mean, you hand in that slip, and you might get anything back. You know, from a shoebox with a couple of loose leaves in it, to something bound in white vellum.

v3: It's always disappointing when they come out with something that looks like a brand new book.

Laughter.

v3: I wanted an old one.

Laughter.

v4: But even some of the new ones are so cool. Like they've got all those Nigerian chapbooks from the fifties.

v1: Yeah.

v4: Those are amazing.

v1: I couldn't believe how much they cost. They're just like these skinny little, like tabloid type things that cost like eight hundred bucks each. Unbelievable.

m: Because they're rare.

v1: Yeah. I love that library, though. I was really impressed when I came here.

m: So I suppose I should expand the question of the book – the kinds of books – say you were doing up your Christmas list for books for people to give you. What kinds of things go onto that list? You said ones you've been recommended by other people. . .

v1: I – personally it'd be reference books for me, at this point.

Agreement.

v2: Yeah, that's what it is now for me too.

v3: Or ones that are too expensive to buy yourself – usually what I ask for. Reference works. Pleasure. Like, probably hard cover books. They're so expensive. So you can get everybody who gives you presents to give you a book.

Laughter.

v3: You don't have to worry about it fitting.

v2: Yeah.

m: And what's the advantage of a hard cover over a paperback?

v3: I just like the solid feel of it.

v4: Especially for a reference book you want it to be around for a while.

m: So, durable. The paper lasts longer. Or just everything, the binding?

v3: It's protected.

v4: It'll stand up to a little more.

v2: I like the soft covers. I mean, I like my dictionaries to be, to be hard cover. . . I don't really care that much, though. . . No, I really like the soft cover. Because they're lighter. I've moved so many times.

v4: [Understanding]

v2: I've moved like eight times in the last seven years. So they're lighter – they're easier to move.

v4: That's true. Packing books. My God.

v2: Everyone hates moving an English major.

v1: Mine are still at home.

v2: Yeah, I have books scattered over the country, actually.

m: That's right? Didn't bring them all, for weight reasons?

[General agreement]

v4: It's true, yeah. I have a copy of Milton and a copy of Shakespeare I got just because I could carry them. I'll read the Oxford Milton at home, but I'll take my – my little pocket Milton to class. I can't stand carrying them.

v3: It's really nice to have that hard cover on your shelf.

v4: Yeah. . . [reluctance]

v2: Yeah, that's true. You know, there's a bit of a – you know, a bit of a display factor.

v3: Yeah.

m: Well, and that's actually the next question: "Are books a part of your lifestyle?"

General agreement.

v3: Oh yeah.

v2: Oh, yeah, for sure.

m: That's part of the question. Do you consider them a – what do you call it? An aesthetic?

v2: I care more about the books I own than what car I drive.

General agreement.

v1: Me, too. My bookshelf is like a big status thing.

m: Is that right?

v1: In some ways, yeah. It's like, I mean I can't afford to buy a car or a new home, and my bookshelf is something that's always going to be with me. For a long time. And it's quite important.

v4: Yeah, it is like a car in a sense – it's like here's my personality.

v2: Yeah, and when I think about what kind of – you know, my dream home or whatever, one of the first rooms I think about – I think about the kitchen and I think about the library. Those are the two things I have designed. Everything else – nothing else matters.

v3: That's right.

m: So if we put that whole library into one object, one reading device. . . Would that be a problem?

[General Reluctance]

v2: It takes away from–

v4: It's true. It does.

v2: Yeah.

v3: What would we do with all the empty shelves, left over?

v2: Exactly. The cherry mahogany that you had imported specially from like Hungary or whatever.

v1: I just. I remember growing up in this house where there was just bookshelves all over the place, and it's–

v4: And it's just such a great feeling, it's like the first time you get into a good library, and it's like, look at all these great books, I could read any book on the shelf.

v1: Like walking into your house.

v4: Thank you. *** wins.

General laughter.

v1: Like walking into the room. You can just like. . . you can just sit there and go through it forever.

v2: One of the things I hate about my apartment – I mean, I love my apartment now, but it's got – it's only got room for one tiny little bookshelf, so everything else is in boxes, in my storage. And it – it's depressing.

General agreement.

v4: I want my books out. Around me.

Agreement.

v3: Something at my house, I'm a neat freak – everything has to be in its own place, except my books. They're everywhere. Piles of books. I don't care if they're on the floor.

Agreement.

v4: My nanny went and re-arranged all my bookshelves in order of size, and I actually cried, because I'd just got all my books out–

v2: Oh.

v4: It's like two thousand books re-arranged, and I had to go back, and it's like–

[Expressions of dismay]

v4: I had them so I could use them.

v3: Yeah, that's right.

v4: I had them in a state where I could actually, you know, roll my hand on any book I needed.

v3: It's funny, to us – to her it made sense to organize them by size.

v4: I was like, Clarita!

v3: But to us it was like – that's so illogical.

Laughter.

m: What about that access factor? If you had it all in one spot, would it be easier to find what you're looking for?

v2: I don't read the same things in the same places, though.

v4: Yeah, it's like using the GATE catalogue rather than going up to the shelves and looking.

v2: I also mark my books, with a pen or in the margins or stuff, and I have a kind of a photographic memory, so I can say: "I'm looking for this section with a note on the upper right hand side" and I can flip through and find it again, even if I don't know what page it's on.

General agreement.

v4: Yeah. You've got a picture of it in your mind. But yeah, you know, if I don't see the books all the time I forget I've got them.

v3: You have too many.

v2: Yeah. Share them with your friends.

Laughter.

v4: It's like, you know, what have I got on gypsies? Well, if I don't around and walk by the George Borrow section once in a while, I'll forget.

m: So you scan the shelves as kind of a reinforcement of what's there.

v4: Well, if I'm interested in something. I've got them sort of roughly organized by subjects. It's like well, have I got anything on health if I wanted to know about typhoid. I'll go – I'll go downstairs to my non-fiction books and look over the couple of bookshelves for that. If it's not there then I know I haven't got it and *I have to get another book*.

Laughter.

v4: Yeah, that's the other thing. Is going over your shelves and saying, "what's missing? What would I like here?"

Agreement.

m: Okay, what about collective things, what about if you had the complete works of somebody in one cover? So you'd get all Foucault in one cover or you'd get all of, I don't know–

v3: I have a couple of books like that. I just find they're so big, and cumbersome – they're not a pleasure to sit and read, sometimes.

m: So that doesn't work in a printed format.

v3: It does and it doesn't. It's nice for reference. To have the complete works of Shakespeare in one book.

v2: That's what I was just thinking.

v3: But if you want to sit and read it and hold it in your lap, then it's not comfortable.

v2: Yeah, mine's about forty pounds, and it's

v3: Yeah.

v1: I'm struggling through Chaucer.

v3: It's the same thing. It's like this big.

v4: And it's true, you know I've got the compact *OED*, the shorter *OED*, and I'll still – if the computer's running I'll go and check it on the GATE rather than, than haul the books out, sometimes.

m: So what if you had one that could contain anything, and you could carry it with you? And then you would have your library at home for–

v1: As a reference, maybe. But not as like, I wouldn't read *Hamlet* on–

v3: But it might be handy if you were in your Shakespeare class, and wanted to look for a passage from another play, and you didn't have all your books with you.

General agreement.

v1: Yeah, that's true.

v4: Yeah, if I could pick and choose. Like if I was teaching a seminar, it's like, well I want to look mainly at this play by Wycherly, but I'd also like to have a copy of this pamphlet, and a page from this. You know, if I could do that instead of bringing my stack of photocopies and books, I could sort of collect them all in one thing.

v2: Yeah. I mean it would work for space, but I tend to um, I tend to sort of, I don't learn as well or take as much in from the screen.

v4: [agreement]

v3: Same here.

v2: So, I find like the paper format – I'm sort of archaic in a sense.

v3: But as a tool – finding things, or in class–

v2: Yeah, like if there's a searchable index or something.

v3: Yeah, a notebook you could hook up to an overhead display. In class, you wouldn't have to worry about photocopying.

v2: That would be neat, for sure.

v3: You'd have everything you need right there.

v4: You know how people come to class with their text, and they've got like a hundred Post-it notes out the side.

Agreement.

v4: If you could do that electronically, that'd be good.

v1: I came from a university that has just recently, um, the whole campus is now wired, which means all classes are being taught in PowerPoint. So everyone brings their little laptop to class, and it wasn't – in my third year it started, and I would look into these dark classrooms, with like, you know the PowerPoint up, and all these zombies sitting there in the dark, and I was thinking Post-it notes would be nice–

v2: Sort of de-humanizing?

v1: Yeah. I think so. I think it's a – in that sense it is, but I guess it's a little bit different than what you're talking about anyways, but it's kind of the same idea, in a way.

v3: Yeah, I would just like it as a tool to supplement the actual human,

v1: Yeah.

v3: –conversational interaction. Instead of – just practically, not having to lug a briefcase full of textbooks and photocopies.

v1: Yeah. That leads to things like people not going to class and logging in from their residence room and stuff, too, so–

v4: As sort of a, you know, performance of what the power gradient is, that's kind of scary, it's like: "we are the projectors, and you are the receivers."

v1: Yeah.

v4: And that's the only way this interaction goes.

General agreement.

v4: But on the other hand I feel the same way when I go into my Milton class – we're all there with our little Miltons, and he's at the end of the table with a stack of twenty-two books. It's like okay–

v2: How does this one work.

Laughter

v4: Okay, we are to you as one is to twenty-four. Got it.

v2: [Laughs] It's good.

v4: So if we all just have one little notebook, that, I feel that–

m: With all those twenty-eight entries kind of thing.

v4: Exactly.

m: Or course packs, is another thing. That we sometimes see, you know, where your prof will generate a lot of photocopies or offprints or whatever, and everybody has to buy this thing. Well, if everyone had the same kind of reader and you could just get that on a disk or whatever—

v2: Those are good. I like the course packs. We had that for one summer course. That was good.

v4: And what I find is that as my classes accumulate, I'm getting literally feet-high stacks of photocopies.

General agreement.

v3: They're hard to organize and to find things in—

v2: How do you file them?

v3: I've got, um, you know those things you put magazines in? I've got them standing up in those. I tried that for a while, and then you just have to flip through the corner, and well, that was getting kind of hard, so I put them in binders, and they're all on shelves, and — but it's still really hard to index them.

v2: Exactly. Do you decide by, like, author, title, theme, and then do you cross-reference? Because it might be gender theory for this paper, but it could be social policy for this paper, and—

v4: And the time it takes to do all of that.

m: And some of them are only a couple of pages.

Agreement.

m: So you can't have a separate file folder for each.

v3: Well, I tried that too, and it didn't work, breaking them up into classes, but some classes use the same one but for different reasons.

Agreement

v2: And then when you're not in course work anymore.

v3: Yeah, the farther away you get from a course, the harder it gets.

v4: Even stuff I did last year, I'm finding, "Jeez, I know I did something like that with Sylvia Brown, but—

v2: Like if, yeah, you know, if I could have a filing system. A computerized filing system that would do it all for me, that I could punch in something and have it spit out, that would be good.

v4: Because, you know, copyright would let us do that. We could reproduce these things electronically because it's for study purposes. So if I could, if you could give me something the size of this sheet that I could take and go [clunk] and then put in my keywords, and it would automatically, you know, generate a, an index out of that for me, that would be like—

v2: That would be bliss.

v4: Everyone doing a thesis in Canada would buy one.

General agreement.

v2: Yeah, because I've got things on computer, and things I've got at school like that I wrote in a notebook and didn't enter into the computer, trying to find that piece of information I want. I can't remember the author. It's like—

v4: Even if it wasn't searchable. Even if it was just an image of the text, that the computer didn't understand as text, if I could find it, if I could copy it in a version that I could find it later. Even if it wasn't a text file, even if it was just a picture of—

v2: Yeah.

v4: You know, a copy. That would be enough.

m: But then how does that interact with your home library? Excuse me. Is it a separate tool, altogether then?

v2: It's an addition to it.

m: It's a separate, individual—

v4: Because I have things in my library that are photocopied, that I put into binders, or bound, or whatever. But it's not very satisfactory.

v2: No.

v4: That's not the part of my library I display.

Agreement.

v4: That's the part that's downstairs stuck away in a corner.

v2: Yeah. Yeah, my filing system is a mess.

v1: I don't even have one.

Laughter.

v1: Mine are just all piled.

v3: Like a cardboard box.

v1: I have that public feminisms class is all photocopied, it's just piling up. It's really depressing. And they're not—

v3: My husband bought me a filing cabinet a couple of weeks ago, because he can't stand my office.

v2: My kingdom for a filing cabinet.

v4: That's what I got for a grad present, when I got my B.A. My parents asked me what they — what I wanted — and I was like “a filing cabinet.” I had four cardboard boxes—

v2: That's it. Forget the trip to Europe. I just want something I can put my articles in.

m: My next question: “Are books a part of your social life? So are you a member of a —”

v2: Of course.

Loud laughter.

v4: Social life? What's that?

More laughter.

v2: Maybe ask the first part of that question.

m: Yes/no, and then. . . So, yeah, do you, like do you borrow books, lend books.

General agreement.

m: You already said people recommend them.

v2: I have a list of like people I borrow books from, and people I've loaned books out to.

v1: Good for you.

v3: That's a good idea. I've lost books — just by forgetting who I loaned it to.

v4: I have a principle of assuming I've given a book away when I loan it. That way when I get it back, it's like "gee, I got a new book." If I don't get it back, no problem.

m: So, what, you go out and buy another one?

v4: Yeah.

v3: Let's all borrow books from ***.

General laughter.

v4: That's why I have three copies of Aldis Huxley's *Island*.

More laughter.

v2: It's a big lender, eh?

v4: Yeah. Yeah. So, whoever needs a copy of that, I've got extra.

v2: Yeah, um, like I have certain friends and colleagues here, when we go out, that's what we spend our time talking about, is oh, you need to read this book because it'll help your thesis. Or I have a copy of this. Or— That's where a lot of my work gets done.

m: So say you had an electronic — this thing we're talking about, where you collect up all the offprints. You've got a copy where you can just give them a copy into their reader—

v2: [Whistles enthusiastically]. Oh. That would be—

v4: That would be fantastic.

General agreement.

m: Rather than you have to give them your hard copy.

v3: Except would you be infringing on the copyright laws? Or pissing someone off, like Sheila Capps?

m: Well—

Laughter.

v2: Or Aphra Behn.

Loud laughter.²²

v2: You pay sixteen dollars. . .

m: Yeah, well, the model for some of these electronic books is if it's in HTML, well, then it's public domain, so—

v2: Yeah. That would actually — that would be a good thing.

v3: That would be good, yeah.

v4: Because you know, a certain amount of that's already going on. People I see at conferences, and I'm E-mailing them afterwards and saying them: "can I get a copy of your paper?"

m: And they'll send you an electronic copy of the paper.

v2: If they remember.

m: But the problem is the reader. You've got to read off the monitor, or print it out.

v4: Print it out. I always print it out.

²² It might not be necessary to footnote a joke, but the idea is that copyright for Behn's work has lapsed, since she lived 1640–1689. Her most widely-known surviving work is a short novel, *Oroonoko*, in which a noble slave loves a princess.

m: You always print? Anybody read off the monitor?

v2: I do, but then I print it out afterwards, so that I can remember it.

v4: Yeah, I'll scan on the monitor. But unless—

v2: I can't make marks on it. And there's something about reading vertical. The vertical doesn't—

v1: I hate how when you print from a Web page, it prints everything though. Has anyone ever had that problem? Like, it prints

v4: All the source code, and—

v1: Twenty friggin' pages, if you — and I only want two.

m: Yeah, what I tend to do is download the Web page as text, and then go through it, put it into a word processor, and format it to print.

v1: Yeah, okay.

v3: But print just the pages you want.

m: It's a bunch of fuss, but—

v4: It is a bunch of fuss. Although if it's something like magazine length — like, I look at, you know, what Netscape puts up for me to read, first thing, and it's really like a magazine. It's not like a book at all. I mean—

m: In terms of length and—

v4: I mean, if — it would be like, you know, reading the old magazines that had fiction and like — I used to do that — it drove me crazy. Where you've always got to find the jumped page — go to page seventeen.

v2: Oh, I hate that.

v3: I hate that.

m: Oh, right.

v2: Continued on page 134. . .

v4: That's what it's like. It's like trying to use a magazine as a book. It just — bleh.

v1: My whole family reads the newspaper off the Web page, actually.

v2: I have it bookmarked on it, but I don't go there very often.

v1: My brother reads like the whole *New York Times* every day off the screen.

v2: Wow.

m: Huh. And then does he tell you about it? Like, does he remember?

v1: Uh, well, he lives in Michigan, so we don't do it very often—

Laughter.

v3: Do they put the whole paper on? Like the *Journal* — I think you can get the whole paper.

v1: I think you can get the whole *New York Times*.

v2: You can get the whole *Globe*.

v4: With the *Washington Post*, too, you can get everything for the last fourteen days free, but you pay for archived articles. So if you're doing research you have to pay, you know, one or two bucks an article.

v3: There's just something about spreading the paper on the table and perusing it.

v4: I hate that. Because my kids always stand on it.

Laughter.

v4: Ever since they were babies, if I had a paper out they'd lie on it. Puke a little bit.

v1: I really like the tabloid size, actually.

v2: I like that size, like the *Calgary Herald*, it's like the dual, like this, and it's too big, and—

v3: You can fold it in half.

v2: You can fold it over and—

v3: Good for reading on the bus—

v2: Yeah.

v3: And stuff, yeah.

v1: Actually I learned the other day, like I always thought tabloids were like *The Sun*. But tabloids is just referring to the size.

v3: The format.

v1: The format, yeah. Anyways, my Dad gave me that little piece of trivia.

v2: Why?

v3: Except that most of the ones that are printed in that format are scum — trashy type.

v1: Is the *Edmonton Sun* in that format?

Agreement.

v3: *The Journal's* a broadsheet.

m: Oh. Okay. I didn't know that. Are there other sizes? Broadsheet, tabloid—

v4: A4.

m: I dunno.

v1: But I think all newspapers should be tabloid size. I hate that foldover, huge thing. Broadsheets. That ***'s kids stand on.

Laughter.

v3: The only thing I don't like about them is that our table isn't big enough for my husband and I to both read them at the same time. So he gets the big space and I wait for sections.

v2: Exactly. That's an interesting sort of morning ritual, right? Who gets what section and how do you argue over it?

v3: I don't even. I solve that problem by staying in bed.

Laughter.

v3: Then I get the paper to myself.

v4: But yeah, the tabloid is like a magazine. It's like, I've got it and you have to wait. There's this sort of social ritual to it. Traditional newspaper.

v3: I like the way the *Journal* is broken up, because I don't even touch the sports section. Come to that and throw it out. Classifieds, unless I'm looking for something that's gone.

v4: Yeah, have you seen people do that? They put in their fifty cents, get the newspaper, pull it out and just throw it away.

Laughter.

v3: I worked for a woman who only read the editorial cartoon. She subscribes to the *Journal* and that's all she reads. And not every day, either. Three times a week. I said, "Why do you bother paying for the paper?" She says, "I just think I should, since it's out there."

v2: I wonder if you could select for sections.

v3: You could always have it delivered just on weekends.

v4: That's what I like about Web news.

v2: Just to what?

v3: Just have it delivered on the weekend if you wanted to.

v1: Well, she should get an Internet connection, obviously.

General agreement.

v4: Just give me the celebrity quote of the day.

v2: Yeah.

Laughter.

v2: Horoscopes.

m: So, if you had a broadsheet reader, if you had an electronic sheet, like a big piece of plastic, and you'd unfold it and then you'd say, "today's—"

v1: Is there any way you could like get, I mean, these screens, do they hurt your eyes like a normal computer screen does? Like is there any way you can get something that's less—

v4: With reflective light.

m: There's a whole variety of new technology available. One is called "organic LEDs" and that's the one I'm banking on for this particular project as a implementation model. And it's basically a sheet of plastic that's like paper. You can roll it up or crumple it up or unfold it or whatever. And then it's a monitor. They're coming out of Cambridge.

v4: But is it, is it direct light or reflected light?

m: I think it's reflected light.

v4: [triumphantly] Yes.

m: If it isn't, then there's one down in the States, called Iridigm Technologies, which is explicitly designed to be reflected light. So it should even read like paper.

v1: So there's no glare.

v3: Well, that's neat.

m: But the only difference is it's not permanently printed, right? You can put anything on it or take anything off.

v2: Cool.

m: And what they're saying about the OLEDs is that they'll eventually be able to do you know, like full colour and motion.

v2: Wow.

m: So you'll have digital wallpaper and stuff. Postcards where you can say "okay, here's everybody in the room" because I've got record pushed, and I mail that away, and somebody pushes "play" and it pans past all the people.

v3: That's cool.

v2: I'm just thinking would there be opportunity to, um, you know, you have those Newtons or whatever and you have the pen you can mark things on? Like to make marginal notes. And the screen would remember it.

m: Actually, the readers that are out now, I think they all have that capacity.²³

v2: Oh, really?

m: They come with a little pen.

v2: How interesting.

m: Yeah, so that function they—

v2: You can personalize the page.

m: Yeah, like where you were saying you remember something by how it looks on the page — the problem is you don't have all the pages there. Whereas if you were doing something like that, I mean you can really bind a set of those kinds of sheets together into a book-like object.

v3: But you'd have search function so you could look for key words.

m: Sure. You could search through it. Well, I guess. You're searching by—

v4: By image.

v3: By image.

m: By image. So. So I don't know. You can't search by that.

v3: But you could make, you could find a system of your own, and put little stars or something in the corner. Then remember that, visually.

m: Or you could put keywords of some kind, maybe. So yeah, there's some potential there, anyway. But yeah, I'm thinking well, you know, what if we had a sheet of this OLED stuff as a newspaper. Would that serve the function of — like, would that work? Or would you, do you still, do you want—

v3: You wouldn't get ink on your hands.

m: A stack of sheets. You wouldn't get print on you.

v3: Yeah.

m: You'd save gajillions of trees. I mean, still use gallons of oil or whatever goes in to make the things but then you could reuse it. You wouldn't necessarily need to get the whole paper, you could just get the — load in the sports page.

v2: I'd still rather have it small.

m: Really? Even if it was—

v2: Yeah.

m: Even if it was going to be a newspaper.

v4: The only time I've ever felt that something should be larger is for art books.

m: Hmm. So maybe you have a bigger reader for art books. What about coffee table books? Do they figure prominently in your lives?

v3: I have them.

v1: I can't afford them.

²³ Not necessarily in a handwriting format. The Rocket eBook, for instance, displays a miniaturized touchscreen keyboard on which the user can type either with a stylus or a very careful fingertip.

v4: I have second hand ones.

v2: I don't have a coffee table.

Laughter.

v1: I do, but it's my dining table as well.

v4: Every table is a coffee table, in my opinion.

m: So what about that? What if you could get not the kinds of books you take to class, and not fiction, but you could get like art books, so you could have all of?

v4: Not until you can get at least 600 dpi.

m: So, better resolution?

v4: I mean, I never look at images on the Web. It's too bloody frustrating.

m: Hmm.

v2: Yeah, I mean, art books have to be arty. That's the purpose. They have to look nice and have to feel good.

v4: The colour correction has to be right.

v2: They have to smell right.

m: Those are only 72. So if they were 600, I mean even 300, they would be okay.

v4: No, no I wouldn't. Not for an art book. I expect the colour and the image to be perfect. I really do.

m: Or else you wouldn't bother.

v4: No.

v3: It's still going to look different, though, because there's going to be some light source involved in it. Isn't it?

m: Well, unless it's a reflective surface. Which they claim some of these new things are.

v4: But even then, how are you going to calibrate the colour?

m: Well, whoever designs the book has to. Or the reader. But yeah. If you walked into a room with twelve monitors and you displayed the image on all twelve, it'll be different on each one.

v3: They'll all be different.

m: Yeah, so.

v3: That's what's nice about print.

m: The quality control is better. That press on that day and that ink you run them on.

v3: Yeah.

m: I think we only have a couple more questions. None of you said you owned anything like these current books, eh?

General agreement.

m: So what would it take if I had to say, "look, what would it take for you to choose an electronic book over a printed book?"

v3: It would have to be on the syllabus, I guess.

Laughter.

v4: I got it free.

Louder laughter.

v2: I would have to have, like a trial with it.

m: Is that right?

General agreement.

v3: It's hard to say if you haven't actually experienced one.

v4: I can tell you for sure that if you've got proprietary text, I won't. I won't. It's like book clubs. I won't.

m: Oh, so if the text is only good for that reader, no way.

v4: Yeah. I want to be able to put whatever text I want in there.

m: Hmm.

v3: Yeah, would you just be replacing your library with a whole bunch of little electronic books? Or would you have one reader and you put disks in it, or—

m: There's different models. I mean, you could have the sort of everybody's library in one title and it stays there permanently, or one cover I mean. Or you could have a reader and you load whatever you want in it.

v4: I think I might do either. I would either have, you know, say a set of four electronic books that held, you know, all my research for this in one place—

m: What about that? What if you could put a whole class together in one electronic book?

v4: It would have all my, all my photocopied articles, all of my notes, you know, all my annotations.

m: Yeah. So instead of going to the library – the bookstore – and buying the books for that class you would go and buy the reader for that class.

v2: If it's, I mean if it were cheaper, like I can spend – classes are, grad classes are probably about \$500, per class, for books.

m: Is that right?

v2: Yeah. Um, some of them are less, but they are usually about—

m: In hundreds of dollars, anyway.

v2: Yeah.

General agreement.

v4: Yeah, oh yeah. I've never had a book list under \$200.

v2: Never.

m: That's just for graduate English classes.

v1: It seems like, well, just the way that English literature studies are going, especially for this public feminisms class where you're reading stuff from, like so many different sources, so we have all these photocopies, so in some classes – I mean in that class a reader would have been good, I think. I'd rather have that than like this huge pile of unorganized articles. And I guess for certain classes it would be good, but for my Chaucer, I like my Riverside Chaucer, fifth edition. Like, you know, so – I don't know.

v2: I'm like of mixed opinion, because in coursework when you have to read all these books that will never be relevant to your dissertation, or you'll never look again. Something like that would be good, because you don't have to shell out the cash, um, if – I'm going on the assumption that it's going to be markedly cheaper. Um, and um, it's just sort of all there, and you can shelve it or sell the disk or whatever when you're done with it.

v4: Or it's just a shell and you can say oh well, I, I bought the reader, I'll dump out their text and I can reuse it—

v2: Yeah.

v4: Like the idea of having three or four reusable — like a floppy disk. Like my Zip disks. I'll have one and it's for transferring my work between places. I'll have three or four of them as backups for storing work.

v2: I could see it being really useful for coursework.

v4: But you don't, you don't put your Shakespeare on a Zip disk.

m: Well, I do.

Laughter.

v3: Shakespeare unzipped.

More laughter.

v3: I might want these just as tools. I think I'd use it as a tool, but I don't think I'd use it for entertainment or for pleasure reading.

v2: I want my place, my sort of library with it.

m: Even with the idea that your library's stored all across Canada, because it was hard to move. That's not—

v2: Yeah, because I keep — that's sort of part of my romantic illusion that one day I'll retrace my steps and pick up those books again.

Laughter.

v2: It's part of my identity right now, so—

General agreement.

v4: Yeah, because that's the thing about a tool like that. Is that it doesn't accumulate. You reuse it.

m: Well, the disk, like you've got a little stack of disks like you've got — my model for thinking of this is every time you buy a CD you don't buy a new CD player

v3: Right.

m: You know, you've got one device that plays the music, and then you buy the—

v1: Well you've got your CD collection.

m: Yeah, you have a CD collection. You have the—

v4: But you'd have to have an object like that.

m: You need an artifact of some kind.

v1: But you know there is something, I don't know. Like people, who are 22 like me and moving all over the place all the time. I'm going to France next year, my parents are moving, and my books are with them. It's scary and if I knew that I — and that's — generally I would like completely to have my book shelf, but it is true that that would be useful. I would know that I had the stuff and right now my books are in limbo.

m: To take with you to France or to have in storage.

v1: Well, if I have this reader thing, right?

m: Yeah, you could carry it. Are you taking your CD collection?

v1: Well, I have all my CDs in a binder. So, yes.

Laughter.

v4: Yeah.

m: So it's straightforward, then. So you would do the same thing with the books.

v1: Yeah, which would be useful because I can't bring my bookshelf to France, obviously. Guess I could take the boat to France, and—

m: With all these steamer trunks. I had a friend who did that, and it washed overboard. He lost — his rare books, Icelandic books.

General chagrin.

v3: We moved this summer but I had a moving company come and do it. I had nearly 100 boxes of books. And these movers were like, "another box of books, another box of books, how many books do you have?" And they, you know, they hefted these big boxes of books everywhere.

m: And they're heavy.

v3: Yeah, well I didn't move them. I didn't care.

Laughter.

m: And you pay by weight, too, so—

v3: I wasn't paying for that, either—

m: [laughs] Well, good.

v3: Next time we move we'll have to pay for it ourselves and then I'll probably rethink this, but I don't know, there's something just so tangible. Well it is tangible, but it's so real about having books. I was just trying to visualize my bookshelf, instead of having—

m: Bookshelves, like a CD rack.

v3: Just having shelves of books—

v2: And the CD rack is just not pleasurable. I mean, it's the same, the CD cases are all the same size and the same black spine, and there's just no differentiation.

General agreement.

v4: Very commercial.

v3: The man I work for is, um, in his family room they've got an 8 x10 wall of CDs. And it's only as deep as a CD case, and there's all these CDs. It's amazing to see.

v4: Yeah, if you could see the front of them instead of the spine it might be cool.

v3: Yeah, but it still looks really neat, they're—

m: Oh, he's got them like normally racked, you just see the edge—

v3: You just see the edge, and they're all standing up. Like books.

v1: That sounds really—

m: It's a wall—

v3: It's a wall.

v1: Yucky.

v3: But it's — it looks so neat. They've got a nice, pine case.

v1: Are they in alphabetical order?

v3: I don't know. I never looked, but

v2: Wow.

v3: It's a real music collection.

m: What if this, what if the CDs came in different sizes and shapes?

v3: Well, if they were different sizes would they all fit in the reader? Or would you have different—

m: Well, the case. You could design the case, right? So maybe about like a CD-shaped, maybe it's a CD inside, but the thing is like a — some are taller, and some are shorter, all within the parameters of fitting a CD. So some have got two CDs, well then it sits, you know, so you've got some variation—

v2: So it isn't just a very boring CD storage.

Laughter.

m: Yeah, but is it just variation that's the issue?

v2: Well, I think it is. I think also maybe it's an unfair comparison, because I don't care as much about my CDs as I do about my books.

General consensus.

v2: I place a lot more stock in, in what the books and the bookshelf looks like than what the CD case does.

v3: I think a lot of this comes down to familiarity. We're used to being surrounded by books.

v1: My brother's a musician—

m: That's part of my argument for the whole thing, that you build up habits or skills or whatever over a lifetime—

v2: Yeah.

v4: And the other thing about a CD is that you're not supposed to handle it. I mean, the less you touch it, the better.

General agreement.

v4: Whereas with books, a book with the pages uncut, you look at it and go "My God—

v1: My brother, who's a musician, his CD collection is so important to him. Like, and books are nothing. So — you should have some people in who are not obsessed with books.

m: Not English graduate students, eh? You'd get a different perspective from them.

v1: Yeah.

v3: Or people who aren't English majors.

v1: Because we are obsessed with our books, really.

v2: Yeah.

v1: Obviously.

m: Which is why I wanted to talk to you guys, you know, like go to the people who are — who have an emotional investment.

v4: And provenance is the other thing. Like if I get, you know, Leonard Cohen's copy of you know, Beethoven's Ninth, well, there's nothing intrinsic in that CD. But you know, if I've got, you know, my great-great Aunt's copy of *Pilgrim's Progress*, that's really something.

Agreement.

v4: Because it's got her writing on the flyleaf. I can see how she wore it with her reading.

v3: That's the other thing about books – we all write in our books. Because they are so personal. My husband has a fit when he sees me writing in a text book, and I always write in the margins. He says "You're defacing the book." But–

v2: I'm leaving my mark, though.

Agreement.

v4: I've got my father's Bible, with all of his marginalia, and some of his notes in it. I've got a– my grandfather had a great tome of rationalist theology, and it's got his annotations in it. I never knew my grandfather.

v1: Even if you can't understand what it says, it still–

v2: I've got my grandfather's, like 1900 edition of Thomas Carlyle.

v4: Oh, right on.

v2: And it's so cool.

v4: That is so wicked – Thomas Carlyle. [laughs]

v2: I know [laughs].

v3: How can you do that with an electronic reader? Can you personalize something–

m: Well, you can annotate the text electronically.

v4: And that would be cool. If I could get, say, ***'s copy of ***, I would like that.

v2: He's such a marginaliast.

v3: Yeah.

v4: Every time I go and take out a book that he's put on reserve, it's got his writing all over the damned thing.

v2: Really.

Laughter.

v4: All over the library books. Isn't that terrible?

v3: Terrible.

v2: That is awful.

v4: You're supposed to erase that part of the tape where I rat on ***.

Loud laughter.

m: Bleep out the name.

v2: I sort of like – I like the marginalia, though. Because I sort of, I feel connected to the readers who have come before me in a sense, that I look and see what this is what they thought was important, and let me think about that for a little while, and–

General agreement.

v4: And that's what a footnote is like, too.

m: I know it was a big deal in Coleridge studies. Coleridge was an inveterate marginaliast. And they had a big project to publish it all. During his lifetime people would lend him books specifically, to get his comments. Get them back, and Coleridge would have written all over them. Yeah. This was a big publishing project.

v1: All of his opium hallucinations.

m: And the question is, what do you – you know, what do you do as a publisher, do you republish the text, in order to have Coleridge's marginalia off to the side? Or do you – I don't know what they ever decided. They were doing an edition at U of T. So I

think that's all. That's all the questions that I had. Does anybody else have any relevant information or opinions, or—

v4: There's one thing I'm wondering about all these electronic book, hardware things.

m: [encouragement]

v4: Is this going to be another one of those book collector type things?

m: Where it's like the Every Woman's library?

v4: Well, I mean there's something to be said for the Everyman's library, but like one — "The World's One Hundred Most Famous Books, Bound in Calf Leather," and—

v3: And who decides?

v2: Oh, with gold leaf.

v3: But who decides what goes into them?

v4: They're sort of like culture in a can.

General agreement.

m: And you buy it and forget about it. Maybe that's what they're for.

v4: If I'm getting something like that, and putting the money in for it, by God, it's got to work for me. If it sits on a shelf — if I buy a CD player, and it sits on a shelf and I never play anything on it, every time I look at it I'm going to kick myself.

m: So you want it to be functional.

v4: Absolutely.

m: And what you're saying is that the function isn't necessarily going to be using it as a leisure reader. You might use it as a tool for work or school.

v2: I could see it as a research tool.

v3: I see it more as a tool. But I don't see it as a pleasure pursuit because I haven't used it that way.

m: So maybe you use it for work for a while and then you sort of import it.

v3: Yeah, although I don't know. Would it be safe to take it in the bathtub? What if you dropped it in?

Laughter.

m: Originally one of my questions on here was "How much reading in the bathtub do you do?"

v2: I always try, and I do none.

v1: I don't have a bathtub, actually.

Laughter.

v4: That is the classic reaction to electronic text, is "you can't read it in the bathtub." And I read a really bitter comment once by some hypertext author, saying, "like these people are taking their Moroccan bound, marbled-endpaper rare books into the bathtub."

v2: Give me a break.

v3: Was that Landow again?

v4: I don't — I don't remember who — somebody was talking about the *Gutenberg Elegies*.

v3: Sven Birkerts.

v4: Yeah. Like Sven Birkerts reads manuscripts in the bathtub.

Laughter.

v2: No, I can never. If I'm in the bath, it's to relax, and if I'm reading, it's to work, so I don't mix the two.

v4: Isn't that interesting. I know a lot of professionals, in like medicine and law, who have no libraries – who never read – because they associate reading so strongly with professional work.

m: Unless they can bill it, they're not going to open a book.

v4: Exactly. If I have a book open in front of me, I'm not done work.

v2: Yeah.

v1: Oh, that's terrible. I think that's awful.

m: You don't feel that way as an English grad student?

v2: I feel that way a lot, actually. I mean, like I said I get two or three leisure books read a year. And that's about 500% less than I did before I started grad school.

v3: But that'll change again once you're done school.

v2: Yeah. It will.

v1: Will it, as a professor?

v3: There'll be times–

v2: Professors that I know, sort of – I mean they go in spurts, it depends on what they're working on.

Agreement.

v4: But yeah, I think the line blurs a little bit.

v1: So things actually do slow down. That's good to know.

v3: I found lately that – I used to always read in the bathtub, to relax, and then when I went to school, I wasn't going to read those books in the tub, because that's work, but lately I've been reading my novels and making my notes in the tub. [laughs]

v1: Really.

v3: Just not – but not reference books. But a novel, yeah.

v1: Well I saw someone on the stairmaster yesterday with a pen and an article, and she was writing while she was on the stairmaster.

v3: How can they write like that?

v2: They do their highlighting in their psych textbooks. It's like Psych 101, and I just think "that's bizarre."

Laughter.

v4: Multitasking.

v2: You're not doing anything particularly well.

v3: That's right, because if you exercise without your brain engaged in what you're doing, you're not doing your muscles–

v4: That's something about reading off the monitor – you can't multitask. Like if I stuff a book in my bag and take the kids to the paddling pool, I can get a couple of chapters of *Clarissa* out of the way. But if I'm reading on the monitor, I can't do anything but read from the monitor. You know, I can't cook supper and read on the monitor.

v3: Oh, God. I do that a lot.

m: Is that right? While reading on a–

v4: You have not spilled coffee on your keyboard yet.

Laughter

v3: Well, I sit – I sit far back from it, with, you know–

v2: I keep a wide berth around my coffee cup and my keyboard.

v3: Yeah.

m: Okay, well, I guess, that's, that's what I hoped that you guys would do for me today, so that's great, if I can collect your surveys–

v2: Was that, helpful?

m: I think so, yeah, you know. I'll sort all that together into the, you know, sort of what I'm looking at in terms of doing this design, so–

v4: You should get contact information to send out invites for when your show goes up.

m: Hmm. Okay, well I've got everybody's E-mail address I think. So I'll E-mail you when that happens.

v1: And then we get to see one of those things?

m: Well, I'll see if I can round one up.

v4: You should at least like get a – borrow one or something.

m: Take part of my scholarship and buy one or something. So I've got what exists.

v4: [enthusiasm]

Laughter.

m: Yeah, but in terms of the actual – the design I do won't get implemented. What I'll do is like a 3D model and you'll get to see it on the monitor, what it might look like, what it might work like. But in terms of these commercial ones, I'll have to see what's available. They have Web sites already, so you can go to those.²⁴

v4: Especially if you got ID to back you up on it.

m: Yeah, they send out review copies to people, because I know that *The Globe* had some articles on them. "Still Not as Good as a Book." That kind of thing. So, they had lent that one.

v4: Whoever's going to this conference. Mark Green might have something–

m: The other thing I'd like to ask if it's possible is if you can E-mail me names of people who might be willing to work on filling out the electronic version of this thing. So it'll be sort of the first week of March, I'll put it up. It'll only be available for a few days.

v4: So, any grad student?

m: Any grad student – it doesn't have to be any department, any gender.

End of tape.

²⁴ See the literature review for more details on the existing electronic books.

Focus group two

The participants in this group were three women graduate students from the University of Alberta (v1 to v3) and the moderator (m). One of the graduate students was from the English department and the other two were from the Department of Art and Design.

The opening statement was not recorded on tape, but was read verbatim from the printed version (see Appendix C: Ethics Review Forms – Statement of Purpose). The transcription begins while participants were filling out the printed survey.

Start Transcription

v1: Now when you're talking about "book," are you talking about the material – as opposed to–

m: Like the physical reading device, rather than the layout.

v1: Not like mystery novels or something. It's more the actual–

m: No, even that, I think, because it says something about format and stuff. It's probably not going to be a folio, if it's a mystery novel. It'll be small. So, you know, you can put that in as potentially helpful. Part of the question in this kind of thing is to what extent can you vary format in the electronic device. Or should you vary the format, I think, because people have cultural expectations of different–

v1: Like the coffee table book, it's always – as opposed to a paperback.

m: So, you guys pretty much always have papers due in this department. It's not like this time of year is worse, is it?

v1: It kind of depends. You can usually – this time of year is worse, because there's usually a paper due at the end of class. They'll stagger them a little, but usually in the last month, because it takes you, I mean, even kind of rushing it, two weeks is kind of the shortest I've known anybody, unless they're going absolutely mad, and so if you've got three papers, say you're doing three classes–

m: You need six weeks.

v1: You need about six weeks. Roughly. You can squeeze it in more, but – so you just start, just the researching. I mean, it's – it's funny, because you go ahead and do it, and you're there for four or five hours, you come back and you've got like two articles [laughs] but you've been doing all that work. So there's that kind of stuff that takes the time. Rather than, you know, sitting down and writing. You can do it in a couple of nights. Some people. And you've also got – there's usually little presentations and stuff, and those almost take as much research as a paper does.

m: As a paper. For like a twenty-minute thing, whatever?

v1: Yeah, because you want to make sure that you've got all the, you know – that you've covered all the sources, you've read up on the whatever so and so said. And it takes a while. At least that's what I find.

[Approx. 850 words have been excised here which were not directly on the topic, but compromised the anonymity of one of the focus group participants.]

m: Well, why don't we start with the first set of questions here. These all have to do with books in one form or another. So the first, cognitive section – I've broken these up into kind of human factors. This is kind of a standard map of how you would divide up a person's interaction with an object. So – on the cognitive side, what leads you to read a book? ***?

v2: All right. It would be, uh, to get some knowledge, refer to facts, um, if it's for leisure, um, this idea of letting my imagination get some exercise. That would be, I think, mainly for me.

m: Are there particular genres? Like, how do you pick a book? You know, it's time you decide you want a new book or whatever, how do you go about – what's the process?

v2: Um, I really like biographies, but they have to be historical. I don't really like contemporary stuff. Um, so something that refers to a fact in the past that I know about. So it gives you a different perspective. I think that's very interesting for me. And in terms of design, if I need research, new stuff that's coming up for the design field, that's what I look for.

m: So, non-fiction in design.

v2: [agreement]

m: So, how about you guys? ***?

v3: I would choose a book that relates to my interest. Sometimes I find that if the cover is good–

Quiet laughter.

m: Is that right? You would– that would work.

v3: Yeah. And a lot of my books are related to design.

m: So, non-fiction.

v3: [agreement] I have a large amount of novels.

m: Fiction books.

v3: Novels.

m: In English, or in Chinese?

v3: [laughs] In Chinese.

m: Oh, is that right?

v3: Yeah. It's the – what do you call it? Ancient world. Um, about fighting. We have a special term for that kind of book.

m: You have a genre. Is that right?

v3: Uh huh.

m: And they're a historical–

v3: Yeah, historical. Ancient–

m: Like, fantasies?

v3: Um, you liked the movie *The White Hair*–

m: [agreement] *The Bride with White Hair*.

v3: Yeah. That kind–

m: That kind of book.

v3: Yeah.

m: Okay.

v2: What movie is that?

Laughter.

m: It's a Hong Kong action movie. Um, everybody has sort of supernatural powers. The villains are like Siamese twins.

Laughter.

m: There's lots of really fast swordplay. And uh, people are – are up in the air a lot. They're on wires. Tsui Hark is the director. Tsui Hark. How do you say it? Who's the director?

v3: [names a different Chinese director]

m: Right. Not of *Bride with White Hair*. But of those kinds of historical movies, a lot of them are done by Tsui Hark.

v3: Yeah.

m: These aren't movies that you know?

v1: Actually yeah, I do.

m: Oh, is that right. [laughs] Right on. You know the *Bride with White Hair*?

v1: Well, no, not Chinese, but my friend – I have a really good friend who's Vietnamese, and they have historical movies, where they're kind of supernatural. They're about twelve videotapes long. I sat through one of them.

[consternation]

v1: I think they are Chinese and then they're dubbed into Korean.

m: And it's like a segmented epic, type of thing.

v1: Yes, yes. Twelve videotapes long. But the same, same type of – yeah, fighting, and beautiful girl, and princes, and princesses. Bored me out of my skull – there were no English subtitles.

[everyone talks at once]

v1: So my friend is there translating. Oh, and now he's doing this.

v3: You can't remember the name.

v1: No, I don't remember. Sorry. It was in Korean. [laughs] I don't speak Korean.

m: It might have Mandarin subtitles though.

v1: Yeah, it might have. Actually it might have been in Mandarin.

m: With Korean subtitles.

v1: With Korean subtitles.

m: Yeah, because we've watched them sometimes where they've got like two pairs of subtitles.

[agreement]

m: So that's the kind of novels you read?

v3: Yeah.

m: What a confession, eh?

v2: [laughs]

m: Is there something about them? Like, how do – how do you pick something from that genre, then?

v3: How do I pick?

m: Yeah, how do you decide?

v3: Oh, yeah. It's all from the same author.

m: Oh, is that right? There's one author that you like.

v3: Yeah.

m: Is it a man, woman?

v3: Man.

m: What's his name?

v3: [gives name in Chinese]

m: Write it down. We can watch for it. Do they translate any of his books into movies?

v3: Yeah, a lot. Have you seen, uh, some of them directed by Tsui Hark. Called *Once Upon a Time*—

m: Sure. *Once Upon a Time in China*. They're about the boxer – the boxer rebellion.

v3: Yeah. With a—

m: With a famous – Fong Sai Yuk? Is the—?

v3: No, not that one.

m: Not that one. But the actor who plays – is it Jet Li – who plays in that, is also in—

v3: Yeah. Right.

m: So you've probably seen these. What about you, ***?

v1: I guess I read books that have to do with my discipline, as well. For me that means a lot of fiction, as well as a lot of nonfiction – because I'm an English major. The things that lead me to read a book. Sometimes the – okay, this getting really physic – the physicality of the book.

m: Sure.

v1: It depends whether I want to read upper class or lower class books. Which is the way I think of it. Upper class books are the books that, um I feel are actually – I read them for enjoyment, but for edification as well. Um, Penguins, stuff like classic novels. Stuff like that. They are usually – and I'm just talking about – it could be the same actual text, but which book I'd buy if I was in the book store. Larger format – the trade paper. Um, usually the one with the nicer painting on the cover, if it's a Penguin.

Quiet laughter.

v1: Um, and that matte finish on the actual text. Or an interesting graphic. Same with – same with theory texts, for me. I prefer my theory texts to be trade papers. I have a thing against hard covers. I don't like them. I don't like handling them.

m: Oh, is that right?

v1: And again, that kind of a matte finish with, with nice graphics. That just – for some reason that intuitively says to me this is kind of a book of value, um, which is I know it's dumb but I've been trained that way I guess. Um, for the lower class books, which is something I'll buy to read on a plane or a train where I can't concentrate. Like I'll buy a novel. Like the latest bestseller of I don't know who, Tom Clancy or something. Um, then it's usually I go by name or design – I'm looking for something small, that I can almost – that's almost I can throw out. That's like, you know, I don't care, at the end of my flight if I've left it on the plane. In fact sometimes I do, because I figure somebody else will pick it up and read it. [laughs]

v2: [agreement]

v1: But it's like a throwaway.

m: Huh.

v1: So something, small, light, not really, not, not nice paper.

v2: That kind of dark looking paper.

v1: Yeah. Yeah. Like you know–

v2: Newspaper stock.

v1: Like a Harlequin Romance would be. Not great paper, not great print, you can just kind of read it and trash it. Same with like a Tom Clancy, or I'm trying to think of other novelists like that, you know. Um. So in that case it's just disposability, more than anything else.

m: How about that.

v1: Isn't that horrid, for an English major to say? You just chuck it out.

m: This whole class of books.

v1: No, I do read them, but –like I'll give them away, or – that's not something I want to keep. The other thing that leads me to read a book sometimes is it looks, especially on somebody else's bookshelf, like, not buying it new, but if it looks well-read. Like, like cracks down the spine.

m: Oh, yeah.

v1: Um, not – I don't like stuff that's been written on a lot, like marked up, but just looks like somebody's really enjoyed it, you know. Then that'll make me – it looks like a really good book.

m: So what do you do? You go out and buy another copy of that, or–

v1: No, I'll scam it off them for a little while, or if I read it and I really like it I'll go and buy a copy for myself. Though I like that in other people, I don't like my own books to look creased and broken. I liked them looking really–

m: You don't buy used books, then?

v1: I do, but I prefer to buy one that looks – like I'm not going to buy one that looks really trashed. I'd rather buy one that looks rather like it's been taken care of. I can't stand it when people don't take care of their – when they crack their spines, like this.

v2: [agreement]

v1: I hate that. Folding over all the pages. Like, corners. I hate that. I – it's this respect thing. Respect your book. I do trash them away but I treat them nicely before I give them away.

Laughter.

m: Leaving it on the airplane.

v1: Before leaving them on the airplane. It's not been tampered with – it's still a good book. I paid my \$9.95 for it. I'm happy. It was a good read, and whoever else wants it, I haven't trashed it up for you. So that's – yeah – that's kind of the things that, that I go for.

m: The next question we've already sort of covered: what do the books you like have in common? So we probably, we probably addressed that. So – affect. What's the difference between the experience of reading a book – we started this with *** already – and the experience of dealing with other sources of information, and entertainment, such as movies or television or the net. So there's one kind of leading question in the survey said, which of those three do you prefer, that was just to kind of get you thinking more along the lines of–

v1: I definitely prefer a book.

m: To any of the other things.

v1: To any of the others. Um, I think because in many ways it's more active – it's a more active engagement, both intellectually, in the – if you're reading a fictional novel, you're creating the world in your own mind, and physically, you're turning the pages,

you're sitting, you're – you can move around, I can lie down, I can sit up, I can walk up from my room. I can put it down for five seconds to brush my teeth and come back and pick it up again. Internet bugs me – way too slow. And I don't like the format the way it goes – I hate scrolling. I hate scrolling. Um, I hate waiting for pictures to come in. That bugs the living crap out of me. Um, and TV – TV's great – don't get me wrong. But it's much more passive. And I tend to tune out, unless it's really interesting. I'm just sitting there to kind of have something to do for fifteen minutes. I'm not really watching. I'm usually talking to somebody or thinking about something. Um, movies again – it's a very passive experience. I like movies, and you get that sort of grand spectacular thing, but it's not as kind of, um, personal, and as, um, involved as I find the act of reading. Plus you can't take a movie or a television or the Internet into the tub with you.

m: Do you read in the bathtub?

v1: All the time. Those – those are another place where I use my disposable texts, because if I drop them in the tub I don't care if they're wrecked.

m: Or they steam up. You know, they get all swelled up.

v1: They swell up. Exactly. Like I wouldn't want to take my really good copy of *Tom Jones* in there, because that would bug me later. However if I take – I was reading Anne Rice the other day to put me to sleep. And if I had that in the tub and I dropped it or it got wrinkled or something, I wouldn't really care. Because I don't – isn't that horrid? But I don't put as much value on that kind of text. In terms of wanting to preserve it as I do the ones I'm going to be working with. I'm sure if I was working with Anne Rice, like–

m: That would change it.

v1: That would change it. I wouldn't want to wreck my Anne Rice.

m: Do you revisit those other ones though – do you, would you re-read Anne Rice in the same way you would re-read–

v1: Sometimes.

m: I'm making an assumption I guess that you do re-read *Tom Jones*.

v1: Yeah. Yes, or something similar. I do. I've had my favourite pulp – pulp novels, I had one that I read when I was in like grade nine about this woman doctor – the first woman doctor ever, and it was *really* cheesy, and it's *really* bad.

v2: [laughs]

v1: I loved it. When I was like thirteen. And I – I still have it. I still re-read it. It's more of a like a comfort thing now. It's like my brainless comfort reading. But, yeah. So I do re-read them sometimes. If they're good.

m: And does that make a difference? Like in that case, you know – did you read that one in the tub or do–?

v1: Yes I did. And I still do. And if I drop – I actually did drop it once and I got kind of mad at myself. But that was still, that was like the upper end of the tub available, of that kind of disposable ones. At one point I actually thought about buying a new copy of it. Because it had gotten kind of mushed about, and I did want to keep it.

m: Now, what about hard covers? You said at some point that–

v1: Yeah, I don't like hard covers. I never have. My dad – my dad's a book lover too. He's like, nuts. We have three or four rooms, like just books. And he loves hard covers. He collects them. He collects first editions. And I've always found them awkward to read. You can't – you've got to be – I was trained to take the dust jacket off. You've got to be careful not to crack the spine. Um, you can't roll around in bed. You know, when I'm reading. With the – sitting like this. It's a much more, um, limiting, I find, text.

v2: So you don't like going to the library and–

v1: Yeah.

v2: Taking one of those books?

v1: Yeah. If – if I have a choice between a hard – unless it's like actual, you know, um, monetary value, like, for example, I've bought hard cover books, first editions, because I know that they're valuable. But given the choice of reading between hard cover and soft – I'll choose the soft cover. It's more portable. It's, uh, easier to read, takes up less space, I don't feel accountable to sit like this, right? I can hold it open with one hand, which you can't do with a hard cover, I find. It's not as comfortable. Um, yeah. A hard cover always tends to close. A paperback you can get it to lie flat.

m: So you're talking about reading in bed, and you sort of like put the book up by your nose. You put your nose – your face–

v1: Yeah, I read like, I'll start sitting, and I'll, like slouch down. Like I'm just saying, reading in bed at night. Or something, right? And you slouch down, you know, I'll get the pillow on one side and I'll be reading like this, and then I'll do it on the other side, and I roll around, you know, and then get up and – I don't when I'm reading – when I'm reading for work, I read at a desk. Usually. Um, when I'm reading for pleasure, I'll read lying down, and–

v3: Why do they publish these two kind of books, in hard cover and paper–

m: Why?

v2: The different sizes?

m: I think partly two different markets. It's kind of divided up now that usually the books are released as hard covers, in a limited print run that's more expensive. So there's some incentive if you're anxious to buy, you'll buy it early and pay extra and get the hard cover.

v1: And it'll be more valuable.

m: Yeah, if you're a collector, it's worth – it's worth more to have the hard cover. And they'll last right, you can give them to your kids. Paperbacks originally, they came out – Penguin was one of the early few in paperbacks, and they marketed them in Coke machines. They came out in a – you put in some money and uh – so they were a disposable. Design of paperbacks to start with. So then there'll be a subsequent re-release into paperback, and often not even the same publisher. Or two different arms of the same publisher will do it, but– yeah, in a lot of cases the small publishers don't. And then sort of, when you've got trade paperbacks–

v1: Trade papers, yeah.

m: Quality paperbacks.

v1: I used to work in a bookstore.

m: Yeah, as a intermediate sort of–

v1: But they often use, I know, Anne Rice – not that I'm a huge Anne Rice fan, I just remember this from when I was working there – she got in a fight with her publishers about the amount of novels – she wanted to change publishers, but she had promised a certain number of hard covers for them. So she published one of her novels as a trade paper to get around that. So it was the size of a hard cover book, but it was paperback.

m: I think usually better quality paper in the–

v1: Yeah.

m: It's not newsprint.

v1: Yeah, it's nice quality paper.

v3: Yeah, we don't have hard cover.

m: In, in Taiwan?

v2: You don't?

v3: No, I can't think of any.

m: Not at all? What about coffee table books, things like that?

v3: Oh, yeah, besides those hard books.

m: The big picture books will be—

v3: [agreement] Yeah. That'll be—

m: But even there, I look at your Chinese, like design award winners. Most of them are paperback. You've got one or two hard cover ones.

v3: Those are from—

m: Oh, they're from Japan, though.

v3: Yeah. They're from a different country.

m: They're not Taiwanese. So what have you got? Paperbacks.

v3: Always.

m: And what do people do with them? Do they collect them?

v3: Yeah, even you know serious novels.

m: Literary ones, even. Are what?

v3: On paper.

m: Are also — first appear. What kind? Is the paper — is it good quality paper, or—

v3: It's thicker.

m: So nice.

v3: Not always nice.

m: Like newsprint.

v3: I'm not sure about newsprint, or—

m: Uh, yeah, newsprint paper is like *Vue* magazine, almost. That kind of paper.

v3: Oh. No.

m: Like, it's almost grey.

v3: No.

m: Not like that. And perfect bound?

v3: Yeah.

m: What about Mexico?

v2: Yeah, we have all of them, but I think there was sort of a process where the government wanted to increase literacy among the people, so they released — and they published — a lot of books like we know books in a softcover edition, in a paperback, like the Anne Rice that you mentioned — that kind of looking. But it's literature.

m: So, like popular classics—

v2: Yeah, popular classics, and I guess it depends more on how much you want to spend in buying a book, so you go to hard cover. But I must say, yeah, we have more hard covered books for books that have a lot of photographs. That look real expensive.

m: So there's a real gap between a hard cover and – there aren't sort of like cheap hard covers and then–

v2: Yeah, we have something in between, yeah. But it was more focussed towards increasing literacy among people, and uh, I find hard cover really really interesting for me, because I like the dust jackets, I think that's interesting – how they are designed. I like you know you can find these books that have these leather bindery

m: Um, okay, yeah.

v2: Those are nice. I think it's a different tactile experience, you know. Or when you go back and find your grandmother's books and then they are all nice and worn out. That gives you a different perspective, at least for me. About the way the books were used. There's sort of some respect to a hard cover. Hard bound book. That's the difference I find. Although I don't mind the paperback editions, but I find them so, so – yeah, disposable. There's something about that I don't like. I always keep my books, even the paperback editions. Yeah, there's that respect I think. And I never use them in the, in the bathroom, because they get, all, you know, curled up and everything. I never read in the bathroom, too. Like I can't understand why people read in the bathroom. Um, so there's special places for me. Where to put books. Where to read them. Yeah.

m: So would you read in bed?

v2: Yeah, I read in bed.

m: That's not a problem.

v2: No.

m: But you'd use a bookmark and stuff, you–

v2: Oh, yes, yes. I never fold the, the corners or anything. I always keep them. And actually – well, you've seen them. I cover them with, with another piece of paper.

m: Oh, that's right.

v2: So the corners are all nice. I find that interesting because then I – when I'm looking for a book, I take another one, let's say because I can't remember the title that I'm looking for, and I go through most of my books again.

m: Ha.

v2: And that reminds me – oh, yeah, I can find that information in this book. Because I don't see the spines. I don't see the titles.

m: You don't write on them.

v2: No. It's just the paper covering the whole book. It's like another dust jacket.

m: Yeah, all the books are covered with – something, the brown paper.

v2: Yeah, the brown paper.

m: Butcher paper.

v1: I used to do that with my school books as well.

m: Is that right?

v1: They made you.

m: Really?

v1: At my school, yeah. I'm talking like grade school with your math book, or whatever.

v2: [agreement/encouragement]

v1: Because they wanted them to last a long time, so you'd make your own little–

m: Oh, for like the – they were the school's books to other students.

v1: And you'd make a little dust cover out of a paper bag.

v2: Paper bag, yeah.

m: What kind of school?

v2: Public.

m: Upper end, lower end? Just a normal public school?

v1: Yeah. It was middle class. Like upper middle.

m: Not like a real private school or anything.

v1: No, like I'm just saying, it was in my neighbourhood, and my neighbourhood was government workers – upper middle class.

m: Yeah.

v1: So that was, I mean, there'd be a good third of them. Lower income families and what not.

m: Yeah, I'm from rural Saskatchewan. Our school didn't have any books, so–

v1: Oh, yeah.

m: Maintaining them wasn't an issue.

v1: We had, some of these books were really old.

Side One ends

m: Let me ask the next question: uh, I guess we've covered that too – “What do you like about books?” No, actually, we never finished the previous question. Because I was going to ask *** about the difference between the movie and the book versions of these books that you read.

v3: Oh.

m: What do you prefer? Would you rather see the–

v3: I like to see the – how the director visualized those plots. Some of them did a good job, but not all of them. Not all of them. Just, no–

m: Do you see multiple adaptations of the same book? Like I know there are English literary books where there's like four or five movie versions of the same book. You know, you can see *Pride and Prejudice* four different ways, or you can see *Dangerous Liaisons* now has four different versions. Same thing?

v3: Especially for this–

m: For this genre. Create the same–

v3: Create the movie version, or the TV versions.

m: And would you see all of them then, or would you– do you sort of know?

v3: I almost saw every–

m: Yeah? You'd go see it all.

v3: Yeah.

m: But only for books you'd read, or would you see the movie first and then read the book?

v3: No, I always – I think I read the book first, and then–

m: Then the movie would appeal to you. What about Web sites? Are there – is there anything comparable?

v3: You mean, if I saw something on the Web site?

m: It strikes me that there are – what do they call them? Multi-User Dungeon Web sites. MUDs. That kind of thing. That would probably be related to the same culture as these books. There are like – people who use the Web for fantasy games.

v3: Oh. Games. Video games. Or multi-users.

m: That's the one – the multi-user – you don't, you've never done that?

v3: No. Um, because the speed is slow.

m: There are quality problems.

v3: I think some companies developed some very simple games for multi-users to play on the Web, and some of my friends, you know, really addict to it.

m: Is that right?

v3: Spend a lot of time playing that.

m: And would they be people that would be reading this same genre of book?

v3: Um, suppose I just say yes.

Laughter

m: You're not sure though.

v3: I only know my friend.

v2: But reading a book from a screen, like, would you prefer to do that?

m: From the screen, no. I mean.

v2: I think it hurts your eyes very much. And I don't get the same amount of information. Like, I don't retain the information as much as reading. For some reason.

v3: For some reason, I feel it's always flashing, so–

v2: [agreement] And I think in a book you can go back a couple of pages and then read again. And the screen, yeah, I hate scrolling up and down as well. It's – it might – I mean at some point it might be confusing, because you lost track of the page number, yeah.

v3: I feel that the difference between reading a book and going to see the movie, it's about – yeah, actually going to see the movie, for me, it's like a social activity. But reading a book is much more of a individual thing. That's all reflect – yeah, it's you, reading alone.

m: Reflection – an exercise in reflection.

v3: Yeah.

v2: In a book you get more details. Like you increase not only the number of words, if you're learning how to read, but for me when I read like *The Perfume*, um, this book of Patrick–

v1: Oh, Suskind – that's a beautiful book.

v2: It's a beautiful book. It's like oh, my God, because it describes about smells, in a book.

v1: It's very evocative.

v2: Yeah. It's really, really good. So all those details that you lose in the translation to a movie, or movies that you've read the book before, then you go and see the movie and there's parts missing. Um, that's what I don't like. And I really get involved in the book



and then I become the heroine or whatever. So I think that's really, really nice about books you can, you can imagine the scenery your own way – there's nothing imposed to you by a director.

v1: Yeah, I have the same thing with movies, too. It's so reliant on the visual, on the visual. And the other thing is that, I mean, you're always being posited as a certain kind of viewer, too. Always. Um, and that's problematic, I find. So, I mean I may not want – I find with a book it's easier to, maybe because of you know, what I'm doing, but, it's easier for me to kind of, um, posit myself as the kind of reader that I want to be. As opposed to somewhere where I'm passively sitting there and I'm being shown something so, that's – I'm being placed in a certain position. And then like what you were saying, it's so visual. I read a book and you can almost – I mean, you know, the brain can do this, you know, you smell a smell, it brings you back some – you read something and it evokes something about that smell. My grandmother's house – and then you smell it again, right? Whereas in a movie, you're so reliant on the visual, you don't get that.

v2: You see the action, but you don't get the smell [laughs].

v1: That book is an excellent example – it's about scent.

v2: Yeah.

v1: And you can – I think somehow you can, you can relate to it, because it's talking about the perfume, about rose mixed with the scent of this, and that, and somehow you're almost able to smell it, yourself. Whereas there's no way that you can put that up on the screen. I mean, you can have like, you know, mist that's a certain colour, but that still won't – you know, pouring from bottles or something, but that still won't have the evocative – the mentally, psychologically evocative feel of a book.

m: What about um – I guess mostly it's been fiction we've been talking about, what about like information sources, comparing books to the Internet, or you have PBS, you have educational television, do you ever use those things? Do you ever watch that?

v2: Yes, I watch PBS.

m: So what would you say about the difference there?

v2: Um, well in that case I think um, yeah, there's a difference when there's a person who is narrating the story. Like when you see those documentaries about nature or animals or um, whatever it could be, there's someone telling you, you know, what's the first step that happens, and so on. Um, which is, which is good because they're illustrating the story. If I were reading about that, I wouldn't visual – I wouldn't be able to visualize many of those things probably because I haven't seen them in real life.

m: Right.

v2: You know, like um–

m: So in that case the visual's a benefit.

v2: Right.

m: But it's only a benefit because there's a narrative. Like do they ever have those kinds of things without a narrative?

v2: Well, it's nice when there's a narrative, because you know, there's a story – sort of a story behind – it's not just facts. It has some continuity, that makes it more interesting, but, yeah, mostly because I haven't seen many of those things. Like if you see a program about molecules. Or those programs about the human being and the eggs and the sperm and everything. Well, I wouldn't be able to imagine that because I haven't seen it, never. Unless you see the visuals, then later on you can refer to that image when you read about it. But at the first time I think it's important – in that case.

m: Because then there's some motion involved, as opposed to like a still. Because you'll get like science textbooks on–

v2: Yeah, because there's motion, yeah.

v3: I find that PBS, things like that, I find them entertainment, but I find that the information that's being given is very piecemeal, and that it's not – um, because it is given to you in a narrative it's easy to ingest and it's kind of fun – and wow, I didn't know this fact about the ancient Romans, or something. But it's a lot harder to critique. For example the, the um, the textual, the narrative, the voiceover of say a two hour long PBS program would probably if it was transcribed be no more than like 50 pages maybe.

v2: [agreement]

m: I would think if that.

v1: If that, and so say you're dealing with something like the fall of Rome.

Laughter.

v1: Like, the fall of Rome in 50 pages is not the same thing as–

v2: [agreement]

v1: And the same with the Internet, you know, um, I've used the Internet once or twice to try to get information on some obscure things. And it's very piecemeal information and it's short – it's a sound bite, just written. With a nice picture. Whereas a book you've got the time and the space to really elaborate. On an idea or a theory or whatnot. And it also gives you the, the mental space and time needed to say, well, okay, but you know what – that's *really persuasive* when I first read it, but – coming back to it you know I don't, I don't think I agree or you know, to take it apart.

m: Is there more inclination to come back to it then?

v1: Yes, I think so.

m: Is that part of it?

v1: I mean, something on TV goes by and it's gone, unless you've videotaped it. And even then, are you going to rewind for a five minute blurb about – and sometimes I find – I agree with the visuals in the sense of scientific stuff. Sometimes I find that the visuals trivialize the text, though. Um, like uh, say talking about human psychology, or gender, there was one I was watching the other day on human sexuality, and they were making some point about men and women aren't necessarily, you know, born male – like masculine, feminine – and I think the image was like – I think it flashed first like a guy and girl holding hands, then cross-dressers! Whoo hoo. And you know, it's – that took away from–

m: It's almost depressing.

Laughter.

v1: Yeah. You know.

m: Shut up, you know.

v1: Exactly. And that took away from it. It's pandering. It's interesting, and fun to watch, and sometimes very valuable information.

v2: And it might catch your attention to some research–

v1: Right. I'm not knocking – I do love PBS, but you can't compare it to – like I'm sure a program on, on textual, on design, I mean, is laughable, compared to what you could read in a book. I'd get something out of it, because I know nothing about textual design, but probably what I'd get out of it would be minimal. And what you guys would get out of it would be probably a good, hardy laugh.

v3: I think they are different medias, because you can't imagine reading a long document on the Web – on the screen – you'd get tired. I think for the Internet, it's about interactivity, so you read a book, those are static information, but when you are

using the Internet, it's how you interact with those information. So I think we should treat them differently.

m: Because the different media require different content.

v3: Yeah.

m: Yeah, I mean people have tried sort of interactive books, right? Those ones for kids where it's like – go through door number one and turn to page 50.

v2: Like those pop-up books?

v1: I used to read those. The choose-your-own-adventures?

m: Yeah.

v1: It's like there was like a story and you got a decision where it said if you want to do this, then turn to page 15 and if you want to do that, turn to page–

v2: Oh, I see.

v1: So every time you read it if you made a different choice–

v2: Um hmm.

v1: I used to read those.

m: And what did you do as a kid, did you–

v1: I cheated.

m: Did you? Did you read straight through?

v1: Oh, no, no. Because then the narrative wouldn't make sense. I'd go to the pages that had "The End" marked on them, and figure out the one where I won, didn't get eaten by aliens or something.

m: Uh.

v1: And then I'd trace it backwards. [laughs] It was the young Agatha Christie in me, I guess.

m: Huh.

v1: So I'd figure out – it'd be like a mental puzzle. I'd figure out how I could get–

m: Yeah, I know ***'s son reads those, and he reads every choice. Like he–

v1: I'd do that too. I'd do it like I'd read and I'd, and I'd choose one and read it, and no – I don't like that.

Laughter

m: And go back and read–

v2: And read–

v1: And I'd go back. And I'd read the other, oh, okay, I'll go with this one. So I cheated all over the place. Everybody does.

m: I think.

v1: I don't think I was alone in that.

m: They're designed – so those are kind of like, print hypertext. In my way of thinking.

v1: I guess.

m: You've got that sort of – jump. But I guess it's not really interactive in that sense that it doesn't sort of bring something different up.

Agreement

m: You go – it's still you.

v1: And it's still – I mean it's a static choice too. I think what you said was very true. I mean the Internet is in constant flux. That's partly what you're – it's what all the different users are constantly putting into it.

Agreement

v3: It's about choice.

v1: Yeah. As opposed to a text which is just there. It's been printed, and it becomes, in a sense at least concrete, at least for the moment.

m: What about those things that jump up at me all the time now. Like, you use a net browser, and it suddenly decides it's going to open a window. You know?

Laughter.

m: To tell me about something. It's like: "shut up." You know, open another – you know.

v2: Some of them are – like even the software. I think Word comes with those things that have eyes – it's a little icon that kinds of talks to, it's like a help.

Understanding

v2: That's annoying for me. Yeah. I don't – it's a screen, yeah, a little window, that comes with a guy – it looks like a book with eyes, or something like that. And it's supposed to be help – like the help that you need.

m: But it guesses.

v1: It insults you.

m: It says "oh, you're doing something stupid." "Shut up, I'm not doing anything wrong."

v2: But it comes up every time you load the software, and it's annoying, because if you know how to use it, why do you need the thing?

m: You don't need that.

v2: Yeah, I know.

m: So there's got to be a way to turn those things off.

v2: Yeah, there must. I don't know.

m: Yeah, I was using somebody else's machine the other day and this thing popped up and started giving me advice.

Quiet laughter.

m: You know. [laughs] And I'm sure it was the best of intentions. But – all right. What's our next? "When do want reading material in a form other than in a book?"

v2: Like what?

m: When? I guess they're like newspapers maybe, or Internet form–

v2: I see.

m: Magazines.

v1: Photocopies?

m: Photocopies.

v1: I mean, when I can't afford to have the whole book, or when I don't need the whole book, a photocopy works fine. It's cheaper.

m: Yeah.

v2: Yeah, when you just have selected readings.

v1: Selected readings, or from a journal. You don't need the whole text, you just need that one section. So then I actually prefer – I'd rather not take the book home – I'd rather not – it'll just take up space. I'd rather just have the article that I can lug around. It's more portable.

m: What happens with that thing, those photocopies, do you–?

v1: I keep them.

m: Do you?

v1: Yes. Again, they're in very good shape. I've highlighted them, but – and I prefer that too, because I prefer when I'm reading an article, I prefer to highlight or write my ideas on the side, and I don't want to do that to a book.

v3: Yeah.

v1: So I'd rather – photocopies are cool, because I can do that, and I don't feel bad.

m: What about then – do you file them then somehow, or – stack 'em?

v1: File them. I have a filing system.

Quiet laughter.

v3: They're all nice.

v1: Not really. I mean, I keep them according to the course that I used it for. And I haven't had so many courses yet that I don't think I need a – like the other day, somebody asked me if I had any articles on, on prostitution. And I remembered I wrote a paper last year in this class, and I went to the file that I kept for the class, and sure enough, there was the three articles I'd used.

m: So you haven't needed to do a lot of, where you're using the same article for different courses.

v1: Yeah, yeah.

m: Or if you do you remember the original course, then–

v2: I think that's easier – to remember the course than to–

v1: To go back to the actual articles.

v2: To the file.

v1: And I do that too, when I, when I switched courses, I went to the old files and took out the articles I thought might prove useful in the new work. For example, I'm taking the course in Eighteenth century sexuality, and um, I went through my Johnson class and my post-colonial class and took out all the texts that I thought might have to do with sexuality of the Eighteenth century–

m: Oh, okay.

v1: And transferred them into this file so now they're accessible to me if I need them.

m: So they were all forwarded into the most current–

v1: Yep.

m: Class.

v2: Or newspapers, hmm. I think I just read the newspapers in order to get the quick fact of things and just when I'm interested in what's going on in the city. And other than that it has a lot of junk that I don't really need [laughs]. So I just scan the newspaper and read what it's interesting and whatever discoveries or information that I need. Just as part of social activity. Something to talk about and something to know.

v1: I don't actually find it bad reading the newspaper on the net. That doesn't bug me. Because it's short – you don't need to scroll that long. There's the same kind of format that you were saying, it kind of fits the format of the Web. So when I was working with the government, we got all the newspapers. You could – it would list the articles – it was actually kind of nice, because it would list the articles. Like this–

m: Title, kind of?

v1: Well, by sections. It would be like "Arts" and all the titles. And you could go down and go "oh, I'll read *that* one," and it would pop up. And I mean it wouldn't be any longer than like a screen. A screen and a bit.

v2: It must have to do with our background. Because I like to read an actual newspaper and see the design.

Laughter.

m: Oh, is that right?

v2: How it is laid out and all these ads and everything. Which is different, too.

m: Which newspapers? You said you got all the newspapers, I guess.

v1: Oh, at where I worked? Yeah, we got *The Globe*, and – we got both the paper and the Internet.

m: Were they the same content?

v1: Yeah.

m: So just–

v1: It depended, if I was bored for five minutes it was really neat to call it up on the net.

v2: [laughs]

v1: On the computer, and just scan through it. But there were some days when if there was a really interesting article that I wanted to read, that caught my eye when I was walking by the – the actual newspapers, I'd grab a newspaper and read it. I had less of a – it didn't bug me one way or the other, basically, with newspaper articles. Because they are short.

m: That's the main thing.

v1: Yeah. Well, I mean if you think, I mean, a column usually runs like this, right, so when you stretched it out over a page on the screen–

m: Oh, okay, it wasn't printed–

v1: No, it was, it was – like you could print it out on a page like this – and that's how it would come out. So it was again like a sound bite.

v3: For me the best thing about Web is it's got a search engine. They sort of organize the content for you. So you can key in the topic and it'll give you a list of the same relevant information. That, I use a lot.

m: Yeah, okay. "Do you consider books a part of your lifestyle?"

v2: Yeah.

m: I guess sort of in what ways, are you a – that's the next one – are you, are you part of a reading book or a discussion group or do you lend books to people and borrow them or do you like talk about books to people, like you do sort of professionally–

v1: I do on sort of a social scale too. I was talking to a guy last night and, and um, I said "Oh you should – this is a really good book you should read it," and he said "Well, the last book I read was *A Hundred and One Dalmatians* when I was seven." He was like, the last–

Laughter

m: Is that right?

v1: Yeah, the last like non-inform – he said author – the last non-medical – and I just looked at him and I was like there's no way that you're going to be a guy that I'm dating. It's like there's no way this is going to work.

v2: [agreement]

m: Oh, is that right? You dismissed him completely?

v1: Yeah. It felt horrible–

m: "I could never get involved with a non-reader."

v2: It's true.

v1: I could not handle dating somebody who could not–

v2: Read. Even have something to talk about, eh?

v1: Yeah. I mean–

m: Is that right?

v2: I would agree with her. That's a way to know what the other person thinks, and they're attitudes.

v1: And it's such a part of me too. If I couldn't recommend books to people, "Oh, look, this is a great book, you should *really* read it." If I can't do that, it's like sharing part of me. If I can't do that–

v2: That's true.

Laughter

v1: You might be a nice guy, but "have a nice life."

Laughter.

v1: Yeah, so it's a really important, important thing. It's like talking about movies, almost.

v2: Yeah, it's a common–

v1: Except it's a little more intimate. Because everybody goes, sees, you know, the big blockbusters. Not everybody's read, you know, *Perfume*, or, or something. And I mean, see, we get more excited about – that fact that we've both read the same thing–

v2: Because we've read them – we've read the book, yeah.

v1: We've both gone to *The Titanic*, or something. Much to my chagrin. My shame.

m: Yeah, you would expect that other people have seen a movie.

v1: But not everybody's read the same books.

m: Do you watch movies alone?

v1: Yeah, sometimes.

v2: Alone? Oh yeah.

m: Because you guys were giving me some kind of story about social interaction being part of a movie.

v2: But let's put it this way. You have to do the small talk, yeah? That's what I've learned here, right? You've got to do small talk. So if you go somewhere and you don't know anybody, well that's a way to start the conversation, right? Have you seen this movie, or have you read this book, and um, and even with friends, too. Yeah, like

something to talk about, too. It's not just a – nothing like we just socialize every day. It's okay to talk about something common, I guess.

m: That's not a – there's not a lot of small talk in Spanish?

v2: Yeah, but I don't do that much.

m: It's different.

v2: It's different. Yeah. It's more personal. Like you go and talk about your life and your problems and blah blah blah blah blah. But in here it's like starting a conversation and saying goodbye. Just for a while.

m: Huh.

v2: I find it difficult for me because I'm not used to do it. Either in Spanish in English, so–. It's like an imposition, you know. I don't know.

m: "Make me talk about nothing."

v2: Yeah, something that I know maybe that I don't have in common with you, like do you really care what happened to me yesterday? I don't know. It's a little bit weird.

m: Huh. What about ***, you didn't say anything about lending books or talking about books with your friends, or–

v3: Yeah. I would agree. You know somebody read the same book, they're part of your–

v2: Your club.

m: A little bit more inside your circle of intimacy, I might say.

v3: Yeah, okay.

Laughter.

m: Just through having read the same book.

v2: It's like having a same, the same code. You know, you can refer to a line and then the other people will know what you are talking about, so–

m: Sure.

v2: That's nice, I think.

v1: And I don't – I find the other thing is I don't tend to discriminate on the basis of reading, which I know some people do. Like some people, my old distinction between good books and bad books, you know like um, I know some people who kind of frown their noses at people who read Harlequin romances. That's not real reading. But I don't think that at all. I think if anybody reads – if they're reading, I don't care what they're reading. Harlequin romances. Tom Clancy. *Tom Jones*. As long as you're reading, it's okay, well, you're in my club. Even if you aren't reading the same thing I am right now. But you've got the potential. So I used to work in a bookstore where women would come in, and um, buy, it mostly sold Harlequin romances, it was a really small bookstore, and that's what its livelihood was. And women – these women would come in – some men, but mostly women – and buy all of the Harlequin romances that came out that month. So, like fifteen to twenty books.

m: Is that right? Come out in a month?

v1: Yeah. They – and we'd pull them out – we'd special order them and pull them off the shelves so they'd have the whole series. And if you think about it, that's a pretty big reading investment.

m: That's a lot of words.

v1: Yeah, and you know – and it was a very big part of their lives. And I really respected that. Like, okay, so it was you know My, *My Towering Love Inferno* was the

title. But I really respected that it was important enough to them that, that they were putting aside that amount of time and money and part – you know, parts of their lives to do it. And that was a great way to talk to them, too, and say “have you got this one yet?” and “this one’s been recommended,” and I got to know them – which was really nice.

m: As regular–

v1: Yeah. They’d come in and they’d say – you know, we’d start talking. And one girl played baseball and another girl really liked this type of book, and I knew another one did so I got them to talk to each other and they started talking about their favourite romance novelists and–

m: Huh.

v2: I think it’s important to read a variety of things, even Barbara Cartland–

v1: Yeah.

v2: Novels.

v1: It’s all good. It’s all using the same faculty.

v2: But you need to read those in order to compare with something good.

v1: Exactly.

v2: As well.

m: Hmm. Okay, what have we got next here. Um, the electronic books, do any of you own or use, or have seen any of these things.

v1: On TV today.

v2: Newspaper, yeah.

m: What did you think of it, looking at it?

v1: Horrid.

m: Really?

v1: Yeah. I had a friend who had a Palm Pilot. It had a little book. That was horrid, too.

m: So what was the horrid part.

v1: It looked like a computer.

m: Little laptop-y thing.

v1: Yeah. I mean they folded. Oh, that’s lovely. And you pushed it, and the page would kind of flip.

m: Like, pretended to on the screen.

v1: Yeah, pretended to like, go like this, but – it isn’t a book. It’s a computer and it looks – it’s grey, and it looks like a computer, and it’s got a – the screen is – I mean it was like green with yellow writing or black writing or something, and–

m: This one on TV.

v1: Yeah.

m: Or his Palm Pilot.

v1: Both.

v2: I think they’re not comfortable. You have to take care of them. Because if you’re investing 700 or 800 dollars, you don’t want to break the thing.

m: You’re not going to leave it on the airplane.

v2: Or put it in your bag, or something. Yeah.

v1: Yeah, you can't roll around with it in bed.

v2: So it's like a special niche for the things.

m: This is true also, I'm thinking also of like your discman or your disc player. Like you've got all these CDs. You know, so there's no analogy there?

v1: I own a Walkman, but I own like a – one of those really sturdy ones. And it's a tape, right? So again, it's a little more disposable than say the CD player. But I wouldn't – for example, I wouldn't have a CD player – I'd be scared of rolling on it or crashing it, or it falling on the ground. I mean, even when my Walkman falls on the ground – ahh –

m: So yeah – it gets treated quite differently as a–

v1: Oh, yeah. Everybody I know who has a, a CD Walkman thing. It's like their baby and they put it in like *this thick* when they walk around with it. Like you're careful with it. Always worried about it getting stolen.

v2: It's like computers. Like you place them in a special place at home, or like the laptop, it has to have that special case–

v1: A laptop's only so portable.

m: Yeah, okay. Um, "what would it take, physically, if you were going to say I'd rather have an electronic book than a paper one?"

v2: [sighs] I know there's a project, don't quote me on this – *** told me about it. There's a book, and it's supposed to have a software where there's this little icon, or this little guy, coming up on the screen and saying "Hey, you haven't read me for two days," whatever. So he talks to you. I would say if there's something funky like that, I would like to have it. But just for the sake of having it. [laughs] I'd put it somewhere–

m: Just for the sake of novelty.

v2: And show it – yeah – to someone else. But not in order to just go and read the whole, like text there.

m: Because isn't he the same little guy that shows up in like Word that says–

v2: No, this is supposed to be a sort of hologram type image, so it's a real guy.

m: So it looks like – it looks like a person instead of–

v2: Yeah, it looks like a person, so – and he does other stuff, too. So it's more interactive in that sense. It has sort of an alarm that comes up and starts – this guy starts talking to you. Yeah, it's like a book talking to you. Um, but I would just buy it for the sake of having the latest technology and see what it can do. It's like buying a Ferby or the tickle-me Elmo. It's nice, but just for a couple of months, and that's it.

m: Huh. So, what about, like part of the thing, you're from ***, right and you come to Edmonton. Did you ship all your books here?

v1: Yes, I did.

m: Or did you leave them all behind and buy new ones?

v1: No, I uh, I picked out – I spent three weeks picking out all the books I was going to bring. Very traumatic.

m: Because there was like a weight limit or a–

v1: Well, because I knew I was going to – I couldn't afford to send my whole bookcase out. Plus I share – my father and I share a – like, he buys them, but they're my books, too. But even the ones that are like, my room, you know, are mine or whatever. I went through and I picked out all of the ones I thought would be useful. That filled six

boxes. Then I decided that was still a little excessive. So I went through those. And I eventually pared it down to I think four.

m: Boxes.

v1: Boxes. And that was, and that was like leaving the stuff that was like killing me to leave.

m: So if you could have all of that in like a one-

v1: No.

m: No way.

v1: No. Because they're my *books*. [laughs] I don't know how to explain it. They're like - they're a collection. They're my collection. It would be like asking someone who collects, um, toy race cars. That if they had one race car that would shift into like every other race car that they had-

m: That could morph-

v1: Just a little morph one. Would - could that replace their whole collection?

m: Yeah. Would that do?

v1: Well it can't, because you know I bought this book here, and this guy gave me this book, and my Dad gave me this one, and this one's signed, and I got these - I remember the bookstore where I got these, and they're partly a keepsake. Keepsake objects. So they have, they have, you know, this one my Mom - with my Mom, you know, it's in pieces, but it's my Mom's, so I'm going to use that. You know, and [laughs] um, so that, that was the problem. I mean in terms of convenience, yeah, it would be great to have, to have one book. That would kind of incorporate all books. Sounds very Umberto Eco or something, but realistically, a book is more than just an object of information or an object of - and I'm not even talking about, you know, its value as an art piece or its value in terms of its rarity or whatever. I mean you remember, and you know where you got it, and it means something even if it's really insignificant. Like you know, even, even if you didn't buy it for a particular reason or whatever but you remember reading it on the bus, and laughing at this part or crying at this part, or getting really emotional at this part. And that is imbued in the actual physicality of the text.

m: In that other physical thing.

v1: Yeah.

m: So even if you could reproduce the physical look of it, that wouldn't be sufficient, because it-

v2: It's like me, I have an eighteenth century, um, edition of *The Divine Comedy* from my grandmother. I wouldn't change that for anything. It's going back and seeing the ink, and you know-

Agreement.

v2: It's not just the story. It's the book itself, and how it feels, and the story behind it - it was my grandmother's, yeah-

m: This object.

v2: [agreement]

v1: And even, and even more like you may think we are talking about more fictional texts, but even, I mean my theory books, you know like I've got, I've got a Foucault, and I'll never want to get rid of that because I remember how damn hard it was to get through that.

Laughter

v1: And that's - I conquered that thing, damn it.

Loud laughter.

v1: And it's going to sit on my shelf in proof of it. [laughs] And that's another thing, I mean for me it's a pride thing, too – the number of books I've read. You can see them, they sit up on my shelf

v2: [agreement]

v1: And I think a lot of people are like that.

m: What if you had a little, physical thing though – what if each of them came on a CD – so you had like a little CD rack, and they were all on it?

v1: [hesitantly] Yeah. Maybe.

v2: The same as having music, huh? Like CDs.

m: Yeah, sure. So you'd have book CDs.

v1: See, I don't have the same attachment to my CD collection as I do to my book collection.

v2: [agreement]

m: For sure not, eh?

v1: For sure not. If one gets wrecked, I'm like, oh, that's too bad, or the case cracks, and I'm like, damn. But you know, my book.

m: The cover tears off–

v1: Somebody spills coffee on my book–

m: That's different–

v1: That's – somebody did that once with a signed copy of Robertson Davies's last novel. First edition, and my friend spilled coffee all over it. But there was nothing I could do. I didn't even get mad at her. It was just like–

m: So what about a supp – what about in a supplementary sense, then? You've still got your grandmother's Dante and so on, but is there any function for an electronic book, then, as a supplement to your book collection?

v1: I guess I could – I was going to say in the case where you need a group of people to have a very similar, identical – almost identical, text.

m: I guess this happens for your classes sometimes. You already own the thing, but then they're using a different edition.

v1: Yeah.

m: So the pagination's off, and–

v1: So maybe in a case like that, or I was going to say government. Say something like – where, where maybe an electronic book would be useful would be government. Government's got rule books coming out of its wazoo, and they change repeatedly. You know they're constantly being updated and it's a real pain, because it means one you have to wait forever to get one sent to your department, and to get rid of the other one, and updates come in sheets, like one page. Here's the update to the manual it's like one page and you've got somehow to smash it in to the book. So, something like that, where it's – there's not really so much of an emotional investment.

m: You wouldn't be emotionally invested in a rule book, anyway.

v1: No, because it's a reference. It's a reference.

m: What about your own reference books. How about dictionaries, and encyclopedias?

v1: Yeah, see something like a dictionary or an encyclopedia, if it's updated. That would be cool.

m: So I guess, searchable, like *** said.

Agreement.

v1: I mean, I think that the, I think that the idea of an electronic book is really, can be very useful in terms of text tagging words, word searches, frequency of use, stuff like that.

v2: As a reference kind of book.

v1: Yeah.

v2: You find the thing, kind of easily.

v1: Yeah. But it wouldn't be for reading – it'd be for working.

v2: Instead of having binders, yeah. With all the information.

v1: Yeah. So I guess that's kind of the one, the one context where I–

m: But even there, it wouldn't be things like Foucault, because–

v1: No.

m: That has the emotional attachment to the content.

v1: Yeah.

m: Or to the whatever. It's very–

v1: Or even, like, even say you have a copy of – I'm using *Tom Jones*, I don't know why, because it's on the top of my head today. But um, say, for word searches for food, words that have to do with food, or the number of times he uses certain pronouns or something. Then an electronic book would be useful. It's a lot – it's a lot faster to pull that kind of information out.

m: And that kind of stuff they have now. The HTML versions and so on–

v1: Yeah, but for the actual pleasure of reading, I don't know if I could ever find it in an electronic book. And there's other things – the smell of books. Like the smell of a new book. I love – and the smell of old books.

v2: [agreement]

v1: Very tangible things like that, that can't – I don't see how they could be incorporated – some, somehow an electronic book, I think will always be – it's always going to be a piece of machinery.

v2: Yeah, like a tool.

v1: Books are – we don't think of them that way anymore.

m: You don't think of them as a tool?

v1: Not anymore, I don't think.

m: What if I can give you a book that has – individual pages. Physical pages like a – except that it's digital paper instead of paper. So you can load and unload different things into it, but it's all, not like a monitor.

v1: How would you save different – you know, go from say *Clarissa* on it to putting – there would be a limited number of–

m: I'm thinking there would be a bin of pages, right, like it would flow in and clamp in and assemble that length, and if you want to keep that you just put it on a shelf and if you want to unload it you just put it back in the little gizmo, push the button and it releases.

v1: Okay.

m: And if you wanted new sheets – you know, you tear a sheet or whatever, well you just get a new one.

v1: That would probably go a longer way, but still–

m: Even that, not not perfect.

v1: It's too, it's too tech– no–

m: Very technical, and one–

v1: It's funny, because I know empirically that that's say no different than the early emergence of the book as book. I mean, that was incredible, but – and it was technical and it was all kinds of wonderful things, but – for some reason it seems so sterile. Because even with the – even with the first books being published, you know it was a bit personal. It was a very big investment to buy them, and you had to take care of them, and somehow they were more personal than something that can be erased and re-written and erased and re-written and erased – it's that impermanency that's frightening, I think.

m: The fact that they can be erased is the problem.

v1: Yeah. The impermanency of it.

m: Huh.

v1: So.

m: Well, that's great. That's my last question. So hopefully that's been recorded. That's been running.

v3: I feel that if I have an electronic book, I can bring it anywhere, and meanwhile I can enjoy reading some of my favourite books. That would be great.

m: That would be great.

v3: Yeah, that would be great. And–

m: Because you had to leave your books back in Taiwan, too, right?

v3: Yeah, I had to leave them. If I really enjoy that books I want to take it to anywhere.

m: So it's not the first choice. But as a second best it would be–

v3: [agreement] Books have that special values, but if I have that, if I can just enjoy reading while I travel, I think sometimes–

v1: I guess too, like my disposable book I was talking about, that I trash on the plane. Well, I guess in that sense a book where I could load up whatever I want, like something I don't have to worry about it at the end, I guess that'd be all right, too.

m: Kind of comparable.

v1: But it'd be an expensive, I mean, compared to four ninety-nine that I could pick up at the bookstore. It'd be an expensive investment.

m: Yeah, potentially. I mean, I'm talking about this electronic paper, because they've got this – it's like an alternative technology, right, where it's going to be cheap.

v1: Yeah. Like if it was, if it was comparable, say to a four ninety-nine. Then yeah, I could see yeah, buying *Tom Jones* because I just feel like reading it, and if I really liked it I could go buy the book, I guess, but–

m: Like, what would be expensive would be the unit and the computer link and stuff.

v1: And the actual software and the text–

m: Yeah, all that stuff – you know, the physical book itself is going to be as – in the same range as paper.

v1: Yeah.

v2: And for me I guess it would be something easy to transport with me – like, I don't really care what happens to it. You know–

m: Whereas I think you still would–

v2: Like I can put it in my bag, and then I don't really mind what it–

m: Oh, like if it gets folded up or – like how robust this stuff is is an issue, too.

v2: Because if it's electronic then I have to take care–

v1: Yeah.

v2: You know, of the thing.

v1: Make sure it doesn't get dusty–

v3: And it better not look like a, a little machine.

General agreement.

v1: You don't want to be the one freak reading out of a–

Laughter

m: Huh. Okay.

v1: Yeah. Not like a machine. Not like anything remotely like a computer. [laughs]

v2: Because even like, I'll show you how I have my calculator. I have this agenda [zipper opening] and I have to put it in here, because if I just put the calculator inside my bag it will get all wrecked and you know – and still, it's uncomfortable for me. But I try to protect the thing in here.

m: Yeah. Because it's a little device.

v2: Yeah. So something [zipper closes]–

m: That doesn't have that quality.

v2: Exactly, yeah.

m: Very interesting. Yeah. No. So we're a little bit early. It's only ninety minutes instead of whatever – fifteen minutes shy of two hours.

v3: Have you ever seen those electronic books?

m: I'm meeting a woman on Friday.

v3: Oh.

m: I've checked their Web site, and I've read the articles that have reviewed them. But I've never handled one.²⁵

v2: In this movie, the one I told you – *Alien*. The last one with Wynona Ryder and–

m: Oh, yeah. Okay.

v2: They have an electronic Bible.

m: Oh, yeah.

v2: But it's like a box. So–

²⁵ I subsequently did have the opportunity to handle a Rocket eBook, thanks to Margaret Mackey of the Department of Library and Information Studies (see the literature review).

m: Is that right? So – like the *Hitchhiker's Guide to the Galaxy*, it was like this little talking laptop.

v3: Oh.

v1: It was a laptop thing.

v2: No this one was like – it looked like a book, but just – you just opened the first page and then there was a screen.

m: Yeah, which is – the SoftBook is, that's what it's got – it's got a little leather cover. Or the EveryBook actually has facing pages – it's got two–

Side Two Ends.

Start Side Three

m: You don't thin it's important that what? I'll let you swallow first.

v3: Yeah.

m: I'll have to get you to repeat it. "I don't think it's important," you said, "that it look like a book."

v3: Yeah, so you actually can–

m: Yeah. That's no so important. What's important?

v3: Portable. [laughs] Yeah. And the content.

m: But didn't you guys say it shouldn't – you said, it shouldn't look like a machine.

v2: Yeah, no.

m: So it doesn't have to look like a book. But it definitely shouldn't look like a machine.

v1: See, I think it should be as close to a book as possible. If you wanted me to buy it, but that's just–

m: Yeah, but it's you – as far as I'm concerned, you're the one I'm designing this for. People like you and your colleagues.

v1: Yeah. Different. Different ideas. For me, if you're going to market it as a book, I want, I want the experience of a book. I don't want–

m: You want it to be more like a book.

v1: Yeah. Because there's a difference between a book and a text, right. The book and the narrative and the text.

m: The content.

v1: I'm not buying the – yeah – if we're talking about you know I'm buying it for the text, but I'm also buying it for the physical book.

v2: I think I would use this book if I know that it's easy to put everywhere, right. And I know that I can load up the information that I need. Say if I go somewhere where I have to, you know, maybe give a lecture or talk in front of people, so I could refer to my notes, or I could refer to a certain part of the book, without bringing the whole thing, together. But it's more like a container – not a book itself, you know. It keeps the valuable information that I need for that trip, and I could just erase it or delete it, but, but I wouldn't be reading from that. um, I don't know–

m: You'd use it as a reference during the course of like a presentation–

v2: Exactly. I find still very difficult to relate to the screen and my eyes get really sore, and uh–

m: With anything like a screen.

v2: Yeah, with anything like a screen.

m: Yeah, and I'm not sure about these organic LEDs that I was telling you about, but there's this other company – I think they're called Iridigm Technology – that has a reflective surface, so it doesn't give off light. So it's not refreshing.

v1: But then you wouldn't, well, not that you'd be able to read in the dark anyways, but – light–

m: Right. You wouldn't be able to read it in the dark. You would read it like paper.

v1: Or, or you'd have to have – but you can read, or I can read – okay, this is getting how obsessive I am about reading, but like, I will read until it goes *black*–

m: It goes dark.

v1: I will be like squinting at my page–

m: Yeah.

v1: Squinting at like car headlights behind me.

m: So you would, yeah, you would have that same experience with this technology.

v1: Oh, okay.

m: It reads like that, rather than like it's got a flashlight behind it, glowing in your eye.

v2: And if it doesn't make any noises, that would be better.

General agreement.

m: Yeah, noises. That's something that hasn't come up at all. Does it hum, because it's got a disk drive.

v1: No. That'd be annoying.

m: Yeah, so that's a problem, because if you put the content on CD or something then it's going to sit and spin. [CD spinning noise]

v1: That would be annoying.

m: So you have to be able to have it silent.

v2: Yeah. That's what I think.

v1: I just can't see – the way these things smell.

v2: That too, the smell.

m: Well, I'm sure something can be done about the smell.

Laughter.

v1: A little spritz, every time you open the–

m: Well, but leather. I mean, we'd bind it in leather, right, so it always smells like – or bind it in linen, instead. I think some of those things might make a difference. What about some of the paraphernalia, or the apparatus that's involved. When we talked about how you pick a book. Do you care about like indexes and tables of contents and–

v1: What about, what would you do about covers?

m: Well, for my design you would have like hard covers that – like after the thing's assembled you snap the cover on to it and then it fills up with the image.

v1: Oh, all right. So there would be various covers.

m: So you would have each – yeah, like whatever you were reading would have the cover design that goes along with it. That comes from the book.

v1: Okay.

m: Covers are important, yeah.

v1: Covers are very important. That makes the difference between what edition you choose, sometimes.

v2: [agreement]

v3: You mean you could have different covers for different books?

m: Yeah. I would include the cover design along with the text. Like you wouldn't just get the content – you would get a cover design as well. Not that you would have multiple cover designs to choose from for one book, but you would have that book's cover as part of the – that's part of my design solution, is to say – and it comes from this, like I haven't talked to anybody who didn't say that the covers aren't important – “just ignore the covers.”

General agreement.

v1: Of course.

m: They're important. Which yeah, I mean, like the SoftBook – that little leather, unchanging–

v1: Unchanging–

m: Cover.

v2: It would be cool if it were, you know, tactile like this – like the ATM machines.

m: Where the screen is–

v2: Touch sensitive. Something like that. Because in terms of the layout, it would be just repeating the book?

m: There again, there's different models that people have propounded. Some people say there should be a flexible layout, so you can have large print or small print or different type, if you like a particular font. But Visible Language had an article on it where they suggested that the designer would give suggestions – so there's like a suggested layout, and then you could modify it (Lücke, pp. 128–149).

v2: Because I'm thinking in terms of designing a book – you rely on the layout, and how the composition of the page is–

m: Sure.

v2: Is set–

m: Oh, like physically.

v2: Yeah, and have a photograph here and a small icon here and two columns, so those, those things–

m: Yeah, and they would be lost. You would have to have different sizes for different – there would be like a coffee table machine and then–

v2: So you would have to buy different versions of the same book.

m: You might, yeah, you might have to buy three different, you know, printers–

v1: You see, so that's the, that's the–

v2: It's like buying more books.

m: It's like buying more books, yeah. If you're the kind of person who only reads coffee table books, you'd get the coffee table version or you might get a range of solutions that are – you get the traveller's edition that's deliberately lighter weight or–

v1: Yeah, okay.

v2: That would be interesting to see.

m: Yeah, well, theoretically I'm having a show. Last week of August – first week of September. I haven't, yeah–

v3: Have you decided to have it?

m: Yeah, well at this point I'm still committed to have one. That's in the Fine Arts gallery here, first floor.

v1: Just like a mockup or whatever.

m: Yeah. It'll have like a bunch of posters discussing my – you know, what I did, and then a copy of the thesis to look at. And what I'll do is probably design on – like I'll use a 3D modelling program to design it. So you get to see. Or maybe I'll make a little video. You can watch. I'll make sure you're invited to that. I'll put it in the graduate student newsletter, which you don't read, but I'll – I'll E-mail it to you, too. So yeah, let me thank you all for your time tonight. I realize how difficult it is to come, by the number of people I invited who didn't.

End of Tape

Appendix C: Ethics review forms

Department of Art and Design
Division of Design Studies
Ethics Committee

Project: Book Skills and the Design of the Electronic Book
Principal Investigator: Stan Ruecker
Starting Date: February 15, 1999
Ending Date: March 7, 1999

Members of the Department of Art and Design Ethics Committee set up to review the above project, agree and accept on the basis of the enclosed document that the above project conforms to acceptable standards of procedures and aims, objectives and use.

Prof. Jorge Frascara _____

Prof. Peter Bartl _____

Prof. Desmond Rochfort (chair) _____

Department of Art and Design Ethics Review

Description of Project and Procedures for Observing Ethical Guidelines

Please provide 2 copies of this document to the Chair, Ethics Committee, Department of Art and Design.

Project Title: Book Skills and the Design of the Electronic Book

Project Deadlines

Date by which project approval is desired: Feb. 12, 1999

Starting Date: February 15, 1999

Ending Date: March 7, 1999

Applicant

Principal Investigator: Stan Ruecker

University Status: Master of Design student completing thesis year

University Address: 3-98 Fine Arts Building

University Telephone: 492-7877

If the principal investigator is a student, please provide the following information:

If the research project is for a thesis or dissertation, has the applicant's Supervisory Committee approved the project?

Yes No

Name of Academic Advisor (or instructor if a course project): Peter Bartl

University Address: 3-98 Fine Arts Building

University Telephone: 492-7859

Signature of Principal Investigator. In case of a graduate student, signature of faculty advisor.

Signature of Graduate Student (if applicable).

Date

Please describe the specific procedures to be used in observing ethical guidelines for research involving human participants. References to the SSHRC Guidelines for research using human subjects are cited below. Researchers should also familiarize themselves with the more detailed discussion in Annex H of the Social Sciences and Humanities Research Council of Canada, "Research Grants: Guide for Applicants." Some granting agencies adopt SSHRC guidelines; others have different guidelines that researchers must follow in making grant applications.

1. Statement of Research Problem and Methods:

(Attach copies of instruments, including tests, interview guides, observational forms, or sample items/questions. In the case of well-known instruments, names only need to be provided).

Electronic books as distinct physical reading devices have existed in commercial form for almost a decade, and for several decades as commonplace references in science fiction. But they have not seen widespread adoption. My hypothesis is that designers have started from the laptop computer as a model and worked toward the book, rather than starting the other way around. In order for a design to be adopted by people who read a lot of books, I think it will need to take into account more of their current needs, opinions, and even prejudices, as well as the basic human factors involved in reading from a printed book.

I will use a survey and two focus group sessions to collect information on how frequent book readers think and feel about books as instruments. The survey will also collect demographic information indicating how important books are in the daily lives of the people surveyed. Finally, I will also collect any information I can on how these same people think and feel about existing electronic books.

2. Who are the participants and how will they be involved in your research?

The participants are women graduate students in the Department of English at the University of Alberta. They will be invited to attend one of two focus group sessions (see attached invitation), where they will first complete a written survey (see attached survey), then speak to a number of focus group questions (see attached focus group questions).

I've chosen this study group on the basis that:

- a) they are members of a group that is likely to use books frequently
- b) as women, they are not traditionally understood to be early adopters of computer-related technology

- c) the English department graduate students are predominantly women, so this larger group is more accurately represented by an all-female cohort
 - d) perhaps most importantly, a number of hitherto out of print and difficult to obtain source texts are now becoming available on the Internet, at sites such as the Victorian Women Writers Project and the Brown Women Writers Project. Economic factors suggest these documents by women authors will never be widely available in print, but are available electronically. So women hoping to work with these materials have a potential interest in improved forms of electronic access.
3. How will the nature and purpose of the research be explained to participants?
- “Certain individual or collective ‘rights’ must be maintained. These include the right to know the precise nature and purpose of the research, so that consent may be given or withheld advisedly...” (#8, p. 27)
- An opening statement will be read at the start of each focus group session, outlining the purpose of the research, the voluntary nature of participation, the right to opt out at any time, and the confidentiality of the information given (see attached opening statement).
4. How will informed consent of participants be obtained?
- “Informed consent should be obtained in writing. Where this is not practical, the procedures used in obtaining consent should be on record.” (#14, p. 28)
- “Written consent should set out: a) the purpose of the research; b) benefits envisaged; c) any inconveniences; d) tasks to be performed; e) rights of the subject, e.g. the right to withdraw without penalty, the right to confidentiality of personal information; f) risks involved; g) the name(s) of the person(s), group(s), or institution(s) eliciting or receiving the consent.” (#15, p. 28)
- Please attach copies of all consent forms to be used.
- Focus group participants will provide consent in writing (see attached consent form).

Book Skills and the Design of the Electronic Book
Focus Group Consent Form

Purpose of the Research

This research project is intended to obtain intelligence on the use of books and opinions about books held by people who read books frequently.

Benefits Envisaged

This information will then be used in the design of an electronic book.

Tasks To Be Performed

The study requires each participant to complete a written survey and speak in a focus group on book skills and the design of the electronic book.

Rights of the Subject

Participation in this study is voluntary and participants may opt out at any time without penalty. Information provided will be kept confidential, and no names will appear in any report related to this project.

Inconveniences or Risks Involved

The survey requires roughly half an hour to complete. The focus group session including the survey will require approximately two hours.

Principal Investigator

Stan Ruecker, M.Des. candidate (visual communication design), Department of Art and Design

I, _____
understand that my participation in this focus group on book skills and the design of the electronic book is voluntary and that I may opt out at any time. The reasons for the study and tasks to be completed have been explained to me. I understand that the information I provide will be kept confidential, and that no names will appear in any report related to this project.

Signature of participant

Date

Opening Focus Group Statement

Thank you for participating in this study.

My name is Stan Ruecker, and I am a graduate student in the University of Alberta in the Department of Art and Design.

Purpose of the Research

This research project is intended to obtain intelligence on the use of books and opinions about books held by people who read books frequently.

Benefits Envisaged

This information will then be used in the design of an electronic book.

Tasks To Be Performed

The study requires each participant to complete a written survey and speak in a focus group on book skills and the design of the electronic book, which is what we are doing here tonight.

Rights of the Subject

Participation in this study is voluntary and you may opt out at any time without penalty. The information you provide will be kept confidential, and no names will appear in any report related to this project.

Inconveniences or Risks Involved

The survey requires roughly half an hour to complete. The focus group session including the survey will require approximately two hours.

Consent Form

At this point I would like you to take a look at these consent forms, which repeat in writing the information I have just given you verbally, and ask you to please sign one of those and return it to me, in order to indicate your consent to participate in this study. The Department of Art and Design is required by the university to keep these forms on file to document the activities of its researchers.

Appendix D: Research methods

Designers have the luxury of being able to choose from a wide variety of research methods, depending on the nature of the project and the kinds of data that seem germane to formulating the design solution. Potentially relevant methods of acquiring data are available from psychology, marketing, mass communication research, sociology, and cultural anthropology, just to name a few (see Table 2: Social science and humanities research methods). Needless to say, this list is far from exhaustive, but I think it is instructive to have it available as a brief indication of the rich variety of methods available.

To a somewhat lesser extent, contemporary researchers in information design have also been active in testing and evaluating a variety of research methodologies. The process of critique and refinement can be expected to continue as design moves away from its roots in craft and toward, not necessarily a more scientific model, but perhaps what might be described as a less subjective one.

Since design researchers are often attempting interventions on complex existing systems, preliminary research based on a methodology intended to examine what already exists will inevitably give an incomplete picture of the field.

For the purposes of trying to understand the printed book as it exists in the lives and minds of frequent book readers, I chose to use a set of focus groups and an electronic survey. These two choices seemed to belong to the class of methods that were potentially useful in cases where the object to be studied did not yet exist, but where some specific domain of knowledge concerning attitudes and opinions might be expected to yield results. Ideally for this project I would have been able to develop a working prototype, in which case some of the other methodologies would have come into play. But the resources and even the technology were not sufficient to use that approach.

I also felt that these were two of the most widely-used methods throughout the humanities, and that experience in the adaptation and use of these strategies in a particular design project would be useful enough in its own right to justify their choice.

Table 2: Social science and humanities research methods

Psychology research methods

- Psychophysical methods
- Psychophysiological methods
- Psychometric tests
- Questionnaires
- Direct observation
- Interviewing
- Discourse analysis
- Focus groups
- Diaries
- Ethnography
- Historical analysis
- Computer simulations

Marketing research methods

Behavioural surveys

Attitudinal surveys

- Usage and attitude research
- Awareness and recall research
- Habits and behaviour studies

Advertising copy research

- Day-after recall research
- Theatre testing
- Split cable measurements
- Starch studies

Product testing

Show testing

Life-style research

Focus groups

Motivation research

Depth interviews

Product development research

Advertising or positioning research

Expert panels

Simulations

Game theory

Mass communication research methods

Content analysis

Interviewing surveys

- Mail
- Telephone
- Face-to-face

Controlled experiments

- Pre-test, post-test with control group
- Post-test only with control group

Secondary analysis

- Trend analysis
- Cohort analysis

Historical research

Legal research

Cultural anthropology research methods

Feminist methods

Transnational research

Participant observation

Direct systematic observation of behavior

Person-centered interviewing and observation

Structured interviewing and questionnaire construction

Discourse-centered methods

Visual anthropology

Archival fieldwork/historical anthropology

Numerical anthropology

Text analysis

Cross-cultural research

Sociology research methods

Case studies

Participant observation

Observation

Questionnaire surveys

Interview surveys

Personal experiences

of the sociologist (original)

of the sociologist (vicarious)

of other people

Use of available data

Experimental studies

Statistical analyses

Information design methods

Attitude surveys

Preference tests

Focus groups

Expert opinion

Diagnostic testing

Iterative design

Participatory design

Appendix E: Principles of survey design

Human beings are unpredictable enough that it is necessary to survey them. This unpredictability carries into how they fill out surveys. But there are some patterns:

- On Likert scales (where preferences are indicated by numbers 1–5 or whatever), nobody likes to indicate extremes. One strategy is to use a 7-point scale and if there are no extreme responses treat the scale as though it had only 5 points.
- “Motherhood” wording elicits motherhood responses: nobody wants to admit they have a small library. Try to find value-neutral or even alternative positive wording. People don’t mind owning a sub-compact car, although they might balk at having a car labelled “smallest.”
- There will always be some people who indicate choices between categories, or give multiple responses where one is requested. Be systematic in tabulating this data. One suggestion is to prefer middling choices to extremes, since the person was unwilling to commit to the extreme, but prefer off-central choices to central ones, because the central response indicates no preference.
- Given no consequences associated with choices, people will often respond in the most congenial manner. “Should the university provide one computer per student?” will tend to elicit acceptance, since computers are generally considered a good thing to have around. “Should the university raise tuition in order to provide more students with computers?” will tend to elicit more considered responses: if the answer is still an unequivocal “yes,” you feel you’ve learned something.
- If you ask for a number, you’ll probably get one. But if your unit of analysis is too small, or the number is too hard to figure out, or the question is a motherhood question, the numbers might not mean anything.
- Try to find alternate interpretations that will get answers to questions you didn’t mean to ask – this may require some prototype testing. For instance, asking for annual income doesn’t indicate whether the income is individual or household. Asking for hours spent reading doesn’t preclude hours spent reading aloud to children.

People don’t want to feel that their answers will come back to haunt them.

- Watch for questions that may jeopardize anonymity. A question about gender may seem harmless, but in a class of 100 men and 1 woman it will likely make the woman feel that her anonymity has been compromised.
- Wherever possible, give people ranges to choose from rather than asking for what might be an indelicately precise number. For instance, people are less uneasy about saying they are between 30 and 40 years old than in saying they are 39. Similarly, they are less likely to skip an optional question on personal income if they can choose a reasonable range rather than writing in an actual dollar figure.

Avoid asking people to do a lot of unnecessary thinking. “Make sure,” in Stanley Varnhagen’s words, “that they are all on the same page.”

- Provide a short list of choices wherever possible, and include an “other (specify)” choice to catch responses outside your categories. If you list too many unfamiliar choices, people will waste time thinking about those.
- Indicate units of time, and tend to larger units without going so large as to make the mental work prohibitive – it is usually more accurate to divide down than to multiply up. For example, if I say I completely read two books from cover to cover in a week, what does that say about a book I’m just starting or one I’m just finishing? And what if I tend to read several books at once?

Whereas if I say I complete nine books in a month, the average week is probably more accurate.

- The unit of analysis should be as large as possible for its purpose. For instance, asking people how many books they own (the unit is the book) may yield less accurate results than asking how many bookcases full of books they have (the unit is the bookcase). Better yet for establishing emotional commitment might be to have an evaluative question: “How would you say your personal library compares to the personal library of the average Canadian?”

Try to guard against people getting bored and quitting before they complete the survey.

- Start with an easy question that should be attractive or interesting.
- Place your key questions no more than 2/3 of the way through the survey, in case they quit before they get to the end.
- Leave the demographics questions for the end, so they don’t put people off at the beginning. And even if they never get answered, you still get the survey questions answered.

About the text

This book was set on a Macintosh using Sabon, a font designed by Jan Tschichold and released in the 1960s. Sabon is based on the 18th century designs of Claude Garamond and his student Jacques Sabon.

